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# The Marine Algae of Tunisia

ERNANI G. MEÑEZ  
and  
ARTHUR C. MATHIESON

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# The Marine Algae of Tunisia

*Ernani G. Meñez  
and Arthur C. Mathieson*

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## ABSTRACT

Meñez, Ernani G., and Arthur C. Mathieson. The Marine Algae of Tunisia. *Smithsonian Contributions to the Marine Sciences*, number 10, 59 pages, 1 figure, 1981.—A taxonomic study of the marine flora of Tunisia, North Africa, was conducted during 1973–1975. A total of 169 species, 37 Chlorophyta, 36 Phaeophyta, 96 Rhodophyta, of benthic marine algae were collected from 29 sites along the Mediterranean coast of Tunisia. Of the 169 species, 57 taxa are newly reported for the country. Of these, 16 represent genera previously unreported.

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# The Marine Algae of Tunisia

*Ernani G. Meñez  
and Arthur C. Mathieson*

## Introduction

The North African country of Tunisia lies on the southwestern shore of the Mediterranean between Algeria and Libya (Figure 1). The country's extensive coastline (approximately 1500 km) borders the eastern and western basins of the Mediterranean. Very few detailed floristic studies of the Tunisian marine flora have been conducted.

The first records of Tunisian marine algae (42 species) were published by Piccone (1884, 1879) from Galite and Cani Islands in northern Tunisia. Patouillard (1897) published a catalog of plants in which Sauvageau reported 6 species of seaweeds from the Gulf of Gabes in southeastern Tunisia. In the same year Debray (1897) reported 30 species from Tunisia. Peterson (1918) listed 19 species collected by Paulsen and Ostenfeld from Galite Island during the winter of 1908–1909 and summer of 1910 cruises of the *Thor's* Danish oceanographic expeditions to the Mediterranean and adjacent seas. Schiffner (1926) published the first marine flora of Tunisia, listing 60 species of algae from Tunis, the capital of the country, and Sfax, a coastal city in the east. Hamel (1926, 1927, 1931a,b) listed 55 species of algae from Tunisia. Feldmann published two short papers (1931a, 1951) on Tunisian algae citing a few

specimens from Gabes and Sousse. Subsequently Feldmann (1961) gave a comprehensive report of 90 species from Galite Island in northern Tunisia. Hamel and Lemoine (1953), in their publication of the Corallinaceae of France and North Africa, listed 15 species of coralline algae from Tunisia. Earlier Lemoine (1924) reported 3 species of calcareous algae from Tunisia during the Mediterranean cruise of the *Pourquois Pas?*. A list of 56 species of seaweeds from the Gulf of Tunis was published by Ben Alaya (1970). Other investigators, such as Freymy (1925), Pottier (1929), Huve (1962), Boudouresque (1967), Mazoyer (1937, 1938), Seurat (1929), Mollinier and Picard (1954), have also contributed to our knowledge of the benthic marine algae in Tunisia.

General collections of seaweeds were made at different times of the year at 29 sites throughout the Tunisian coast (Figure 1) between 1973–1975. Voucher specimens of all the species collected at each site were prepared. Whenever possible, 5 or more replicates of each species were made. Habitat descriptions of the 29 collecting sites (Figure 1) are summarized in "Collecting Locations on the Tunisian Coast." Overall, the sites represent exposed, semi-exposed, and sheltered locations, and the algae were either growing on rocks or sand-mud substrate or epiphytically on seagrasses or other algae. The specimens were collected principally by free diving to 3 m deep or dredging to a depth of 40 m.

A total of 169 taxa of seaweeds was collected

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*Ernani G. Meñez, Smithsonian Oceanographic Sorting Center, Smithsonian Institution, Washington, D.C. 20560. Arthur C. Mathieson, director, Jackson Estuarine Laboratory, University of New Hampshire, Durham, New Hampshire 03824.*

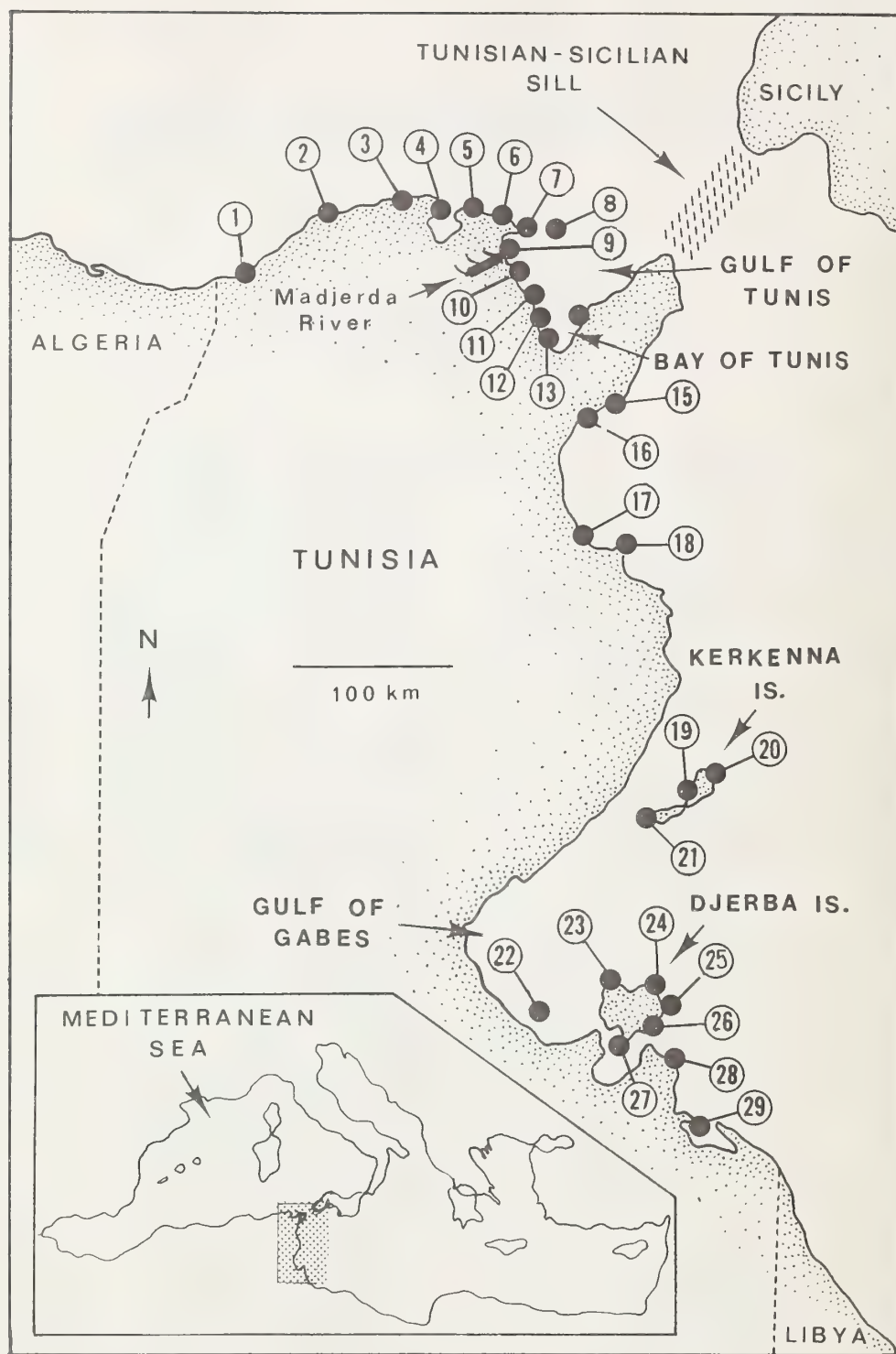


FIGURE 1.—General collecting sites throughout the Tunisian coast.



from the 29 sites in Tunisia, including 37 (22%) Chlorophyta, 36 (21%) Phaeophyta, and 96 (57%) Rhodophyta. Of the 169 species, 57 are newly reported from Tunisia, i.e., 14 Chlorophyta, 8 Phaeophyta and 35 Rhodophyta. Of these, 16 represent genera previously unreported. The genera are: *Spatoglossum*, *Punctaria*, *Blidingia*, *Derbesia*, *Pseudobryopsis*, *Scinaia*, *Myriogramme*, *Bonnemaisonia*, *Falkenbergia*, *Cryptonemia*, *Halarachnion*, *Hypoglossum*, *Rhodymenia*, *Pterosiphonia*, *Spyridia*, *Digenia*. The taxa new to Tunisia are designated with an asterisk (\*) in the systematic section. Basionyms and synonyms are included in the list. References pertinent to Tunisian marine flora, general collection data, and the distribution of seaweed taxa in the Mediterranean, northeastern Atlantic, Red Sea, and Indian Ocean are included in the list. Collector is designated as EGM for E. G. Meñez. The numbers in *italic* cited after the collector correspond to collecting stations, followed by specimen numbers in *roman*. Specimens are being deposited in the U.S. National Herbarium, Smithsonian Institution (US), the Hogdon Herbarium (NHA) at the University of New Hampshire, and the Institut National Scientifique, Technical d'Océanographie et des Pêches (IN-STOP) in Tunisia.

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### Collecting Locations on the Tunisian Coast

The Tunisian coastline is approximately 1500 km long. The northern boundary (08°45'00" N lat., 36°57'00" E long.) is 5 km west of the city of Tabarka and the southern boundary (11°34'00" N lat., 33°10' 00" E long.) is 6 km south of Lake El Bibane. A brief description of each collecting station (Figure 1) is given below.

Station 1, Tabarka: a sheltered rocky beach at the western edge of the port. The substrate consists of large subtidal rock outcrops. A rich algal flora is evident.

Station 2, Cap Serrat: a semi-exposed sandy beach 56 km west of Bizerte. A rocky promontory with large tidepools provides an excellent substrate for a well-developed flora. Heavy populations of *Posidonia* with numerous algal epiphytes.

Station 3, Bechateur: an isolated, semi-exposed rocky site with a sandy beach 3 km west of the town. Rocky outcrops and *Posidonia* beds abound with algae.

Station 4, Corniche, Bizerte: an exposed sandy beach located behind Hotel Corniche 4 km west of the town. Collection consisted of drift specimens of algae.

Station 5, Cap Zebib: an exposed sandy beach 12 km west of Bizerte. Vertical surfaces of rock benches, subtidal rock platforms, and sparse population of seagrass provide an excellent substrate for a rich algal flora.

Station 6, Raf Raf: an exposed sandy beach 15 km west of Cap Zebib. The substrate consists of a few, small rock outcrops and sand. Algae were sparse.

Station 7, Ras Sidi Ali El Mekki: an exposed sandy beach at the northwest end of Gulf of Tunis. Few, scattered rocks with poor algal cover.

Station 8, Ile Plane: an exposed offshore station 8 km west of Ras Sidi Ali El Mekki. The substrate consists of rocks mixed with sand and calcareous algae fragments. Algae were dredged from depths of 15–75 m.

Station 9, mouth of Madjerda: a semi-exposed site near a river outlet 8 km south of Ras Sidi Ali El Mekki. The substrate consists of muddy sand. Algae were dredged from depths of 15–57 m.

Station 10, Raouad: an exposed sandy beach 13 km south of Madjerda on the western side of the Gulf of Tunis. The substrate consists of sand with few, isolated rocks. Algae collection consisted of drift specimens.

Station 11, Gammarth: a semi-exposed sandy beach behind Abou Nawas Hotel 9 km south of Raouad. Rock outcrops and *Cymodocea* beds abound with well-developed marine flora.

Station 12, Corniche, La Marsa: a sheltered sandy beach 7 km north of Gammarth in the Bay of Tunis. A rocky promontory and extensive *Cymodocea* beds provide a good substrate for a rich algal flora.

Station 13, Sidi Bou Said: a sheltered marina enclosed by man-made rock piles 3 km south of Corniche, La Marsa. Sparse *Cymodocea* covered with algal epiphytes.

Station 14, Korbous: a semi-exposed rocky beach 6 km south of the town on the Cap Bon peninsula. Few algae were found on intertidal rocks and *Cymodocea*.

Station 15, Nabeul: an exposed rocky beach behind Hotel Pyramides on the Cap Bon peninsula. Intertidal rock platforms with few algae.

Station 16, Hammamet: a semi-exposed sandy beach behind an old fortification on the Cap Bon peninsula. Isolated boulders provide a good substrate for rich populations of *Codium* and *Porphyra*.

Station 17, Sousse: a semi-exposed sandy beach adjacent to the main boulevard. Massive rock piles 50 m offshore support a rich algal flora.

Station 18, Monastir: an exposed rocky beach 14 km south-

west of Sousse. The substrate consists of sand and rocks. Vegetation is poor.

Station 19, Sidi Fredj, Kerkenna Island: a semi-exposed sandy-muddy beach on the western end of the island. Occasional rocks and *Cymodocea* beds provide substrate for the algae.

Station 20, El Attaya, Kerkenna Island: an exposed sandy-muddy beach on the southern end of the island. Intertidal rock platforms and *Cymodocea* beds abound with lush algal vegetation.

Station 21, Sidi Youssef, Kerkenna Island: a sheltered sandy-muddy beach adjacent to the ferry-landing. Sand, mud, and occasional rocks support a poor vegetation.

Station 22, Gulf of Gabes: an offshore station 72 km south of the city of Sfax. Algae were dredged from depths of 37–38 m.

Station 23, Bordj Djillidj, Djerba Island: an exposed sandy beach on the northwestern end of the island. Coarse sand supports few algae.

Station 24, Dar Djerba, Djerba Island: an exposed sandy beach behind Hotel Dar Djerba. Rock outcrops with poor cover of algae.

Station 25, Sakiet, Djerba Island: an exposed sandy beach 3 km south of Dar Djerba. Seagrass, rocks, and sand provide substrate for algae.

Station 26, El Kantara, Djerba Island: a sheltered sandy beach on the southern end of the island. Intertidal rock platforms and *Cymodocea* beds provide a good substrate for marine vegetation.

Station 27, Aghir, Djerba Island: a semi-exposed sandy beach 5 km north of El Kantara. *Cymodocea* with numerous algal epiphytes. Occasional rocks support sparse populations of larger algae.

Station 28, Zarzis: an exposed sandy beach adjacent to a small bridge 18 km south of El Kantara. The substrate consists of rocks and sand. Vegetation is poor.

Station 29, El Bibane: a sheltered salt-water lake 8 km north of the Libyan border. The substrate inside the lake consists of mud and sand, which support thick populations of *Cystoseira*, *Udotea*, and *Halimeda*. Subtidal rock platforms at the narrow opening into the lake with rich algal cover.

### Key to the Marine Algae of Tunisia

1. Plants calcified ..... 2
  - Plants not calcified ..... 13
2. A simple stalk bearing a disk at the apex .... ***Acetabularia acetabulum***
  - Plants not a stalk bearing a disk at the apex ..... 3
3. Plants flabellate ..... ***Udotea petiolata***
  - Plants not flabellate ..... 4
4. Plants erect ..... 5
  - Plants crustose ..... 10



5. Plants stiff, with heavy calcification ..... 6  
   Plants soft and pliable, moderately calcified ..... *Liagora*  
     A. Plants irregularly branched, with many laterals ..... *L. distenta*  
       Plants dichotomously branched, without laterals ..... *L. viscida*
6. Plants with simple stalk and terminal tufts of free filaments .....  
   ..... *Espera mediterranea*  
   Plants not a simple stalk with terminal tufts of filaments ..... 7
7. Holdfast fibrous ..... *Halimeda tuna*  
   Holdfast not fibrous ..... 8
8. Plants with axial conceptacles ..... 9  
   Plants with apical conceptacles ..... *Haliptilon squamatum*  
   Plants with lateral conceptacles ..... *Amphiroa*  
     A. Upper segments compressed, cylindrical below, dichotomously  
       branched, branches often recurved ..... *A. beauvoisii*  
       Segments terete, branches not recurved ..... *A. rigida*
9. Branching dichotomous ..... *Jania*  
   A. Diameter of main segments more than 400  $\mu$ ; plants more than 4 cm  
       high ..... *J. longifurca*  
       Diameter of main segments less than 250  $\mu$ ; plants up to 5 cm  
       high ..... B  
   B. Habit corymbose, segments 3–6 times as long as broad .. *J. rubens*  
       Habit divaricate, segments 2–3 times as long as broad .....  
       ..... *J. corniculata*
9. Branching pinnate ..... *Corallina*  
   A. Conceptacles without horns ..... *C. officinalis*  
       Conceptacles with horns ..... B  
   B. Plants saxicolous; basal disk bears many large erect fronds; intergen-  
       iculum compressed ..... *C. elongata*  
       Plants epiphytic; basal disk bears single erect fronds; intergeniculum  
       partly cylindrical ..... *C. granifera*
10. Thallus heavily encrusted with lime; sporangia in conceptacles ..... 11  
   Thallus moderately encrusted with lime; sporangia scattered between  
       erect filaments(paraphyses) ..... *Peyssonnelia*  
   A. Plants crustose, loosely attached, somewhat rigid and stony, deep  
       red ..... *P. rubra*  
       Plants crustose, closely adhering to substrate, leathery, brownish to  
       rust colored ..... *P. squamaria*
11. Secondary pit connections present ..... 12  
   Secondary pit connections absent ..... *Fosliella farinosa*
12. Plants epiphytic on other algae ..... *Dermatolithon pustulatum*  
   Plants saxicolous ..... *Lithophyllum incrustans*
13. Plants filamentous ..... 14  
   Plants not filamentous ..... 34
14. Filaments branched ..... 15  
   Filaments unbranched ..... *Chaetomorpha aerea*

15. Filaments entirely uniseriate ..... 16
  - Filaments partly or entirely multiseriate ..... 26
16. Filaments with reticulate, clathrate, or fragmented chloroplast; multinucleate ..... 17
  - Filaments without reticulate, clathrate, or fragmented chloroplast; uninucleate ..... 18
17. Thallus free-floating; chloroplast clathrate or fragmented; filaments entangled ..... *Cladophoropsis modonensis*
  - Thallus attached; chloroplast reticulate; filaments free ... *Cladophora*
    - A. Plants a spongy mass of interwoven filaments ..... *C. albida*
      - Plants consisting of free filaments ..... B
    - B. Rhizoids numerous, long, rising from basal filaments ... *C. prolifera*
      - Rhizoids few, short, arising from basal filaments ..... C
    - C. Filaments fine, soft, silky, and pale green ..... *C. crystallina*
      - Filaments coarse, not silky, dark green ..... D
    - D. Plants forming tufted cushions, not more than 1 cm high ..... *C. lutescens*
      - Plants erect, more than 2 cm high ..... E
    - E. Filaments near the base 150–200  $\mu$  in diameter, 6–10 times as long as broad ..... *C. utriculosa*
      - Filaments near the base less than 150  $\mu$  (rarely 200  $\mu$ ) in diameter, 2–7 times as long as broad ..... F
    - F. Branch system acropetally organized, falcate ..... *C. dalmatica*
      - Branch system not acropetally organized, straight ..... G
    - G. Filaments 80–150  $\mu$  in diameter; branches opposite or in fours; cells 3–4 times as long as broad ..... *C. rupestris*
      - Filaments 120–200  $\mu$  in diameter; branching radial; cells 2–6 times as long as broad ..... *C. ramosissima*
18. Filaments without involucre cells ..... 19
  - Filaments bearing involucre cells ..... A
    - A. Branching alternate or irregular, plants bushy . *Anotrichium tenue*
      - Branching dichotomous, plants tufted ..... *Griffithsia*
    - B. Tetrasporangia naked ..... *G. flosculosa*
      - Tetrasporangia covered ..... *G. phyllamphora*
19. Plants free-floating, green ..... *Derbesia lamourouxii*
  - Plants attached, color various but not green ..... 20
20. Filaments occasionally epiphytic, reproducing commonly by poly-spores ..... 21
  - Filaments epiphytic, reproducing commonly by monospores ..... *Acrochaetium*
    - A. Base composed of creeping filaments ..... *A. codiculum*
      - Base composed of a disk ..... B
    - B. Disk produces creeping filaments ..... *A. virgatulum*
      - Disk produces directly erect filaments ..... *A. savianum*



21. Filaments with highly refractive lateral vesicular cells ..... *Trailliella intricata*  
     Filaments without refractive lateral vesicular cells ..... 22
22. Filaments ecorticate ..... 23  
     Filaments corticated at the nodes or sometimes cortical cells covering  
     entire uniseriate axis ..... *Ceramium*  
     A. Filaments beset with spines at the nodes ..... *C. ciliatum*  
         Filaments without spines ..... B  
     B. Plants entirely corticated ..... *C. rubrum*  
         Plants corticated only at the nodes ..... C  
     C. Filaments setaceous at the base ..... *C. diaphanum*  
         Filaments not setaceous at the base ..... D  
     D. Cortical cells distinctly dissimilar in size and shape; tetrasporangia  
         covered by cortical cells ..... E  
         Cortical cells similar in size and shape; tetrasporangia naked .....  
             ..... *C. tenuissimum*  
     E. Cortical cells at the base of the node larger than cells above .....  
         ..... *C. tenerimum*  
         Cortical cells above the node larger than cells below .....  
             ..... *C. gracillimum*
23. Sporangia tetrapartite or tetrahedral ..... 24  
     Sporangia unilocular ..... 25
24. Sporangia tetrapartite; cells uninucleate .... *Antithamnion cruciatum*  
     Sporangia tetrahedral; cells plurinucleate ..... *Callithamnion*  
     A. Tetrasporangia elliptical; ultimate branchlets pinnate or di-  
         chotomous ..... B  
         Tetrasporangia oval; ultimate branchlets alternate .....  
             ..... *C. tetragonum*  
     B. Tetrasporangia lateral on branches; branchlets pinnate .....  
         ..... *C. byssoides*  
         Tetrasporangia axial on branches; branchlets dichotomous .....  
             ..... *C. granulatum*
25. Chromatophores numerous, discoid ..... *Giffordia hincksiae*  
     Chromatophores few, banded ..... *Ectocarpus*  
     A. Base of plants tightly entangled becoming free above; ultimate bran-  
         chlets secund and ending in a hair; plurilocular gametangia ovate-  
         acuminate ..... *E. fasciculatus*  
         Base of plants loosely entangled becoming free above; ultimate  
         branchlets secund, few ending in a hair; plurilocular gametangia  
         subulate-conical, sometimes apices ending in long multicellular  
         hairs ..... *E. siliculosus*
26. Filaments without propagula ..... 27  
     Filaments with stalked, bi- or triradiate propagula ..... *Sphacelaria*  
     A. Branching irregular; propagulum bi- or triradiate ..... B  
         Branching pinnate; propagulum triradiate ..... *S. cirrosa*

- B. Propagulum triradiate ..... ***S. tribuloides***  
     Propagulum biradiate ..... ***S. furcigera***
27. Cells without pit connections ..... 28  
     Cells with pit connections ..... 30
28. Filaments uniseriate throughout ..... 29  
     Filaments uniseriate below becoming multiseriate above .....  
         ..... ***Bangia fuscopurpurea***
29. Filaments unbranched, with gelatinous sheaths .. ***Goniotrichum alsidii***  
     Filaments branched, without gelatinous sheaths .. ***Erythrotrichia carnea***
30. Filaments with 3 pericentral cells ..... ***Falkenbergia rufolanosa***  
     Filaments with 4 or more pericentral cells ..... 31
31. Branches not formed in regular sequences ..... 32  
     Determinate and indeterminate branches formed in regular  
     sequences ..... ***Herposiphonia***  
     A. Pericentral cells less than 10; erect determinate branches less than  
         1 mm long ..... ***H. tenella* f. *secunda***  
         Pericentral cells more than 20; erect determinate branches more than  
         1 mm long ..... ***H. tenella***
32. Plants erect, sometimes with decumbent basal filaments; apices  
     straight ..... 33  
     Plants with creeping primary axes, lateral branches with recurved  
     apex ..... ***Lophosiphonia***  
     A. Pericentral cells 4; rhizoids saccate ..... ***L. sacchoriza***  
         Pericentral cells more than 4; rhizoids not saccate .. ***L. subadunca***
33. Main axes polysiphonous; ultimate branches monosiphonous .....  
     ..... ***Heterosiphonia wurdemanni***  
     Filaments entirely polysiphonous ..... ***Polysiphonia***  
     A. Primary axes with 4 pericentral cells ..... B  
         Primary axes with 16–20 pericentral cells ..... ***P. opaca***  
     B. Filaments corticated ..... C  
         Filaments uncorticated ..... D  
     C. Plants 10–15 cm high, branching alternate ..... ***P. violacea***  
         Plants more than 15 cm high, branching irregular ..... ***P. elongata***  
     D. Plants less than 3 cm high; branching irregular ..... ***P. macrocarpa***  
         Plants more than 10 cm high; branching pseudodichotomous .....  
         ..... ***P. urceolata***
34. Plants not spongy or feltlike, without inflated utricles ..... 35  
     Plants spongy or feltlike with a layer of inflated utricles ..... ***Codium***  
     A. Plants an unbranched spherical mass ..... ***C. bursa***  
         Plants erect, subdichotomously branched ..... ***C. decorticatum***
35. Plants subspherical and convoluted ..... ***Colpomenia sinuosa***  
     Plants not subspherical and convoluted ..... 36
36. Thallus with inrolled margins ..... ***Padina pavonica***  
     Thallus without inrolled margins ..... 37



37. Medulla traversed by a system of filaments (trabeculae) ..... *Caulerpa prolifera*  
 Medulla without trabeculae ..... 38
38. Thallus not tufted, coarse and stiff, often more than 10 cm high, ramuli  
 not basally constricted ..... 39  
 Thallus tufted, soft and flexuous, less than 10 cm high, with ramuli  
 basally constricted and pinnately or multifariously arranged .....  
 ..... *Bryopsis*
- A. Ramuli multifarious ..... B  
 Ramuli distichous, sometimes with only one row of ramuli ..... C
- B. Main axes profusely branched ..... *B. hypnoides*  
 Main axes simple ..... *B. muscosa*
- C. Diameter of ramuli less than 50  $\mu$  ..... *B. balbisiana*  
 Diameter of ramuli more than 50  $\mu$  ..... *B. plumosa*
39. Plants bearing air-vesicles ..... 40  
 Plants without air-vesicles ..... 41
40. Foliar structures spinelike; receptacles developed near tips of  
 branches ..... *Cystoseira*
- A. Single axis produced from a single basal disk ..... B  
 Several axes produced from a single basal disk ..... C
- B. Branches beset with long, slender, generally dichotomous ramuli;  
 vesicles catenate ..... *C. barbata*  
 Branches beset with short, stubby, spiny, dichotomous ramuli; vesicles  
 solitary ..... *C. mediterranea*
- C. Axes and branches compressed, becoming terete distally; large fusi-  
 form vesicles conspicuously catenate at younger parts of the plant  
 ..... *C. compressa*  
 Axes and branches terete; small round vesicles solitary or sometimes  
 double and borne at bases of ramuli ..... D
- D. Ramuli short, not more than 3 mm long, crowded or thickly set  
 radially on branches ..... E  
 Ramuli long, slender, more than 3 mm long, branches and ramuli  
 patent ..... F
- E. Ramuli short, torulose, with blunt tips ..... *C. schiffneri*  
 Ramuli slightly compressed, forked, with pointed tips involute, com-  
 pletely covering axes and branches, except short portion near the  
 basal disk ..... *C. sedoides*
- F. Ramuli compressed, irregular to opposite ..... *C. myriophylloides*  
 Ramuli terete, dichotomous to subdichotomous ..... G
- G. Basal disk producing two axes with many branches; ramuli  
 dichotomous ..... *C. sauvageauiana*  
 Basal disk producing more than two axes; branches clothed with tiny  
 spinelike projections at the lower end; branchlets arising from apex  
 of each main branch ..... *C. discors*
40. Foliar structures narrow or broad blades; receptacles axil-  
 lary ..... *Sargassum*

- A. Blades linear-lanceolate, 5–9 cm long; vesicles with alated stalks; receptacles up to 7 mm long ..... ***S. linifolium***  
 Blades lanceolate, 1–2 cm long; vesicles with simple stalks, receptacles 2–4 mm long ..... ***S. vulgare***
41. Thallus tubular, brown and constricted ..... ***Scytosiphon lomentaria***  
 Thallus, if tubular, not brown and constricted ..... 42
42. Thallus not consisting of vacuolate cells ..... 43  
 Thallus consisting of vacuolate cells ..... ***Valonia***  
 A. Cells crowded together in a mass; cells ovoid, obovate or clavate, more than 5 mm in diameter .....  
 ..... ***V. macrophysa***  
 Cells loose, long and clavate, less than 5 mm in diameter .....  
 ..... ***V. utricularis***
43. Thallus green and tubular ..... 44  
 Thallus not green and tubular ..... 45
44. Two or more thalli arising from a single discoid holdfast .....  
 ..... ***Blidingia marginata***  
 Thallus arising singly from a discoid holdfast ..... ***Enteromorpha***  
 A. Plants tubular near the base, expanded distally, unbranched, margins of blades hollow ..... ***E. linza***  
 Plants entirely cylindrical or compressed or expanded distally, simple or branched, hollow throughout ..... B  
 B. Cells in longitudinal series or at least in ultimate divisions ..... C  
 Cells not in longitudinal series ..... F  
 C. Plants repeatedly and profusely branched ..... D  
 Plants simple or with proliferations ..... E  
 D. Plants stiff, with short, spinelike branchlets ..... ***E. ramulosa***  
 Plants filiform, with elongate branchlets ..... ***E. clathrata***  
 E. Plants without proliferations ..... ***E. flexuosa***  
 Plants with proliferations ..... ***E. prolifera***  
 F. Plants unbranched, expanded distally, often contorted and open at the end ..... ***E. intestinalis***  
 Plants branched, expanded distally and compressed . . ***E. compressa***
45. Plants olive-brown to dark brown ..... 46  
 Plants not brown ..... 59
46. Thallus consisting of a small monostromatic disk of radiating filaments ..... ***Myrionema strangulans***  
 Thallus not a monostromatic disk ..... 47
47. Thallus with a distinct midrib ..... ***Dictyopteris membranacea***  
 Thallus without a midrib ..... 48
48. Entire plant a slippery dark brown crust ..... ***Ralfsia verrucosa***  
 Entire plant not a slippery dark brown crust ..... 49
49. Blades subpalmately lobed with an irregularly dentate margin .....  
 ..... ***Spatoglossum schroederi***  
 Blades not subpalmately lobed ..... 50



50. Blades wedge shaped ..... *Taonia atomaria*  
     Blades not wedge shaped ..... 51
51. Plants consisting of an entire lanceolate blade ..... *Punctaria latifolia*  
     Plants not a lanceolate blade ..... 52
52. Plants prostrate or appressed to substrate by numerous rhizoids .....  
     ..... *Zanardinia prototypus*  
     Plants erect ..... 53
53. Thallus without distichous or multipinnate branching ..... 54  
     Thallus with distichous or multipinnate branching ..... *Halopteris*  
     A. Branching multipinnate; plants attached by a disk ..... *H. filicina*  
     Branching distichous; plants attached by rhizoidal filaments .....  
     ..... *H. scoparia*
54. Branchlets whorled; main axes covered by rhizoidal filaments .....  
     ..... *Cladostephus verticillatus*  
     Branchlets not whorled; main axes not covered by rhizoidal  
     filaments ..... 55
55. Blades flabellate and incised ..... *Zonaria tournefortii*  
     Blades not flabellate and incised ..... 56
56. Thallus strap shaped ..... 57  
     Thallus not strap shaped ..... 58
57. Medulla consisting of a single layer of cells ..... *Dictyota*  
     A. Blades straight, more than 2 mm wide ..... *D. dichotoma*  
     Blades twisted, less than 2 mm wide ..... *D. linearis*  
     Medulla with at least two layers of cells ..... *Dilophus*  
     A. Blades spiralled ..... *D. spiralis*  
     Blades straight ..... *D. fasciola*
58. Branchlets dichotomous; sporangia borne on straight, clavate paraphyses  
     in spherical sori ..... *Spermatocnus paradoxus*  
     Branchlets subdichotomous; sporangia borne on incurved, clavate  
     paraphyses in hemispherical sori ..... *Stilophora rhizodes*
59. Plants green ..... 60  
     Plants not green ..... 63
60. Entire plant club shaped ..... *Dasycladus clavaeformis*  
     Entire plant not club shaped ..... 61
61. Thallus flabellate, formed by polychotomously branched cells .....  
     ..... *Anadyomene stellata*  
     Thallus not flabellate ..... 63
62. Thallus tufted, consisting of uniseriate rows of cells originating from  
     creeping rhizomes ..... *Pseudobryopsis myura*  
     Thallus a membranous, expanded, distromatic blade ..... *Ulva*  
     A. Plants with simple, lanceolate blades ..... *U. lactuca*  
     Plants with broad lobed blades ..... *U. rigida*
63. Blades ligulate or strap shaped ..... 64  
     Blades not ligulate or strap shaped ..... 67
64. Blade surface proliferous ..... *Halarachnion ligulatum*  
     Blade surface not proliferous ..... 65

65. Blades ligulate and twisted ..... ***Vidalia volubilis***  
 Blades ligulate to strap shaped and not twisted ..... 66
66. Plants consisting of simple, strap-shaped blades with inrolled apices ..... ***Rytiphloea tinctoria***  
 Plants consisting of proliferous, ligulate to strap-shaped blades without inrolled apices ..... ***Rissoella verruculosa***
67. Entire plant one or two cells thick ..... 68  
 Entire plant more than two cells thick ..... 69
68. Thallus monostromatic ..... ***Porphyra leucosticta***  
 Thallus distromatic ..... ***Myriogramme distromatica***
69. Blades with a midrib ..... ***Hypoglossum woodwardii***  
 Blades without a midrib ..... 70
70. Thallus without a stalk ..... 71  
 Thallus consisting of a distinct stalk, with expanded, flat, proliferous blades above ..... ***Phyllophora***  
 A. Plants with long, terete stalk expanding into flabellate, forked branches above ..... ***P. nervosa***  
 Plants with a short, terete stalk and with strap-shaped, dichotomous segments above ..... ***P. pseudoceranoides***
71. Plants one cell thick, except in lower portions, occasionally branches with hooked apices ..... ***Acrosorium uncinatum***  
 Plants more than one cell thick, branches rarely with hooked apices .. 72
72. Medulla with stellate cells ..... 73  
 Medulla without stellate cells ..... 74
73. Stellate cells numerous, large, with many refractive cells .....  
 ..... ***Kallymenia microphylla***  
 Stellate cells few, small, with few refractive cells .....  
 ..... ***Cryptonemia seminervis***
74. Thallus expanded into a semicircular blade, repeatedly cleft into dichotomous segments ..... ***Rhodymenia pseudopalmata***  
 Thallus not semicircular and not cleft into segments ..... 75
75. Plants with central-filament structure; monosiphonous (uniseriate) or polysiphonous (with development of pericentral cells around central cell); naked or corticated; auxillary cells produced from supporting cells after fertilization ..... 76  
 Plants without pericentral cells; not uniseriate; auxillary cells absent, or if present, they are formed before fertilization ..... 85
76. Main axes covered with uniseriate, branched filaments; soft and delicate; older parts clothed by rhizoidal filaments ..... ***Dasya baillouviana***  
 Axes and branches with or without short, stiff, or spinelike branchlets; rigid and cartilaginous; rhizoidal filaments absent ..... 77
77. Apical cells in sunken pits ..... 78  
 Apical cells not in sunken pits ..... 79
78. Pericentral cells distinctly arranged in section; tetrasporangia developed from pericentral cells and embedded below cortical area .. ***Chondria***



- A. Ramuli attenuated at base and apex ..... *C. tenuissima*  
     Ramuli clavate ..... B
- B. Ramuli long, truncated at apex ..... *C. coerulescens*  
     Ramuli short, rounded apex ..... *C. dasyphylla*
- 78. Pericentral cells not distinct in section; tetrasporangia found outside of  
     cortical area and not developed from pericentral cells .... *Laurencia*
  - A. Thallus terete ..... B  
     Thallus compressed ..... *L. pinnatifida*
  - B. Branching alternate ..... *L. papillosa*  
     Branching opposite ..... *L. obtusa*
- 79. Main axes corticated by downgrowth of filaments from nodal cells,  
     pinnate-alternately branched ..... *Wrangelia penicillata*  
     Main axes naked, if corticated, then not consisting of filaments; branch-  
     ing irregular ..... 80
- 80. Branches pectinate or second, with two rows of subulate  
     ramuli ..... *Halopitys incurvus*  
     Branches not pectinate or secund and without rows of subulate  
     ramuli ..... 81
- 81. Spur branches present, bearing spinelike branchlets .....  
     ..... *Acanthophora najadiformis*  
     Spur branches absent ..... 82
- 82. Plants corticated ..... 83  
     Plants ecorticated ..... *Alsidium corallinum*
- 83. Branching alternate or pinnate, terete or compressed ..... 84  
     Branching dichotomous, terete ..... *Digenia simplex*
- 84. Main axes with alternate branches producing short, slender, deciduous  
     spinelike branchlets ..... *Spyridia filamentosa*  
     Main axes producing pinnately arranged simple branchlets .....  
     ..... *Pterosiphonia*
  - A. Plants procumbent, less than 5 cm high, branchlets terete .....  
     ..... *P. pennata*  
     Plants erect, more than 5 cm high, compressed ..... *P. complanata*
- 85. Typical auxillary cells absent ..... 86  
     Typical auxillary cells present ..... 90
- 86. Plants haplobiontic ..... 87  
     Plants diplobiontic ..... 89
- 87. Plants uniaxial ..... 88  
     Plants multiaxial ..... *Scinaia forcellata*
- 88. Plants bushy, in brushlike tufts, alternately branched .....  
     ..... *Asparagopsis armata*  
     Plants not bushy, with alternate, closely packed patent branchlets, and  
     spinelike ramuli covering ..... *Bonnemaisonia asparagoides*
- 89. Thallus compressed, rhizines present in the central medulla .....  
     ..... *Pterocladia capillacea*  
     Thallus terete or compressed, rhizines present in the subcortical  
     region ..... *Gelidium*

- A. Plants with prostrate axes ..... ***G. pusillum***  
 Plants without prostrate axes ..... B
- B. Plants erect, with broad flat axes and linear-lanceolate branches  
 beset with bristle-like pinnae; branching distichous .. ***G. latifolium***  
 Plants erect, terete shortly above the base, becoming flat above,  
 pinnules often pinnate-alternate, occasionally radial .....  
 ..... ***G. pectinatum***
- 90. Auxillary cells formed by ordinary intercalary cells ..... 91  
 Auxillary cells formed by daughter cells of the supporting cell ..... 96
- 91. Branching pinnately-decompound with alternately secund branch-  
 lets ..... ***Plocamium cartilagineum***  
 Branching not pinnately-decompound and without alternate secund  
 branchlets ..... 92
- 92. Branches with spur branchlets, branch tips often hooked .....  
 ..... ***Hypnea musciformis***  
 Branches without spur branchlets, branch tips straight ..... 93
- 93. Thallus filiform, terete, irregularly branched; branches curved  
 ..... ***Gigartina acicularis***  
 Thallus not filiform, terete or compressed, branches straight ..... 94
- 94. Plants less than 5 cm high; branching dichotomous; branches slightly  
 compressed ..... ***Gymnogongrus griffithsia***  
 Plants more than 5 cm high; branching pinnate; branches terete or  
 compressed ..... 95
- 95. Branches fringed with numerous tiny proliferations which bear the  
 cystocarps ..... ***Sphaerococcus coronopifolius***  
 Branches without proliferations, cystocarps sessile ..... ***Gracilaria***  
 A. Branches arcuate ..... ***G. arcuata***  
 Branches straight ..... B
- B. Main axes compressed, repeatedly pinnately branched .....  
 ..... ***G. cervicornis***  
 Main axes terete or slightly compressed, branching radial ..... C
- C. Thallus terete, with spinelike branchlets ..... ***G. armata***  
 Thallus slightly compressed, without spinelike branchlets .....  
 ..... ***G. verrucosa***
- 96. Plants with stipitate pyriform vesicles ..... ***Chrysomenia ventricosa***  
 Plants without vesicles ..... 97
- 97. Plants hollow, or with few medullary filaments ..... 98  
 Plants entirely solid, or with solid axes below and hollow above .... 99
- 98. Plants entirely hollow ..... ***Champia parvula***  
 Plants solid at bases of branches ..... ***Lomentaria articulata***
- 99. Axes solid below and hollow above; irregularly branched .....  
 ..... ***Gastroclonium clavatum***  
 Axes with few medullary filaments; branching verticillate .....  
 ..... ***Chylocladia verticillata***



**Division PHAEOPHYTA****Class PHAEOPHYCEAE****Order ECTOCARPALES****Family ECTOCARPACEAE*****Ectocarpus fasciculatus* Harvey**

\**Ectocarpus fasciculatus* Harvey, 1851, pl. 273.—Gayral, 1958: 122, 197, 199.—Seoane-Camba, 1965:69.—Ardre, 1970: 231.—Boudouresque and Perrett, 1977:96.

DISTRIBUTION.—Tunisia (La Marsa); northeastern Atlantic (Portugal, Spain, Morocco); Mediterranean (France, Corsica).

SPECIMENS STUDIED.—EGM 12: 298(US); 301 (NHA).

REMARKS.—Common; found in June and August epiphytic on various algae and *Cymodocea nodosa*.

***Ectocarpus siliculosus* (Dillwyn) Lyngbye**

*Conferva siliculosa* Dillwyn, 1807:69.

*Ectocarpus siliculosus* (Dillwyn) Lyngbye, 1819:131.—Bornet, 1892:246.—Funk, 1927:239.—Feldmann, 1931b:209; 1937:265.—Hamel, 1931d:21.—Papenfuss, 1968:28.—Ardre, 1970:229.—Gerloff and Geissler, 1971:743.—Güven and Östig, 1971:122.—Giaccone et al., 1973, table iv.—Harotinidis and Tsekos, 1975:212.

DISTRIBUTION.—Tunisia (Tabarka, La Marsa, Sousse); northeastern Atlantic (Portugal, Morocco); Mediterranean (Spain, France, Italy, Sicily, Greece, Turkey, Algeria); Red Sea.

SPECIMENS STUDIED.—EGM 1: 296 (INSTOP), 302(US); 17: 297(NHA).

REMARKS.—Common; found in January, February, April, May, and August epiphytic on various algae and *Cymodocea nodosa*.

**\**Giffordia hincksiae* (Harvey) Hamel**

*Ectocarpus hincksiae* Harvey, 1841:40.—Bornet, 1892:246.

*Giffordia hincksiae* (Harvey) Hamel, 1939:xv.—Gayral, 1958: 200.—Seoane-Camba, 1965:70.—Ardre, 1970:238.

DISTRIBUTION.—Tunisia (Tabarka, Sousse); northeastern Atlantic (Portugal, Spain, Morocco).

SPECIMENS STUDIED.—EGM 1: 308, 309; 17: 306(US), 307(NHA), 310 (INSTOP).

REMARKS.—Common; found in April epiphytic on various algae and *Cymodocea nodosa*.

**Family RALFSIACEAE*****Ralfsia verrucosa* (Areschoug) J. Agardh**

*Cruoria verrucosa* Areschoug, 1843:264.

*Ralfsia verrucosa* (Areschoug) J. Agardh, 1848:62.—Piccone, 1884:117.—Bornet, 1892:241.—Boergesen, 1926:64.—Funk, 1927:344.—Feldmann, 1931b:210; 1961:505.—Riedl, 1963:47.—Seoane-Camba, 1965:70.—Papenfuss, 1968:30.—Ardre, 1970:247.—Gerloff and Geissler, 1971: 744.—Giaccone et al., 1973:110.—Furnari and Scamacca, 1973:7.—Boudouresque and Perret, 1977:100.

DISTRIBUTION.—Tunisia (Tabarka); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Corsica, Italy, Sicily, Adriatic Sea, Greece, Algeria); Red Sea.

SPECIMENS STUDIED.—EGM 1: 492(NHA); 18: 1976(US).

REMARKS.—Occasional; found in April growing as crust on rocks in the sublittoral zone.

**Order SPHACELARIALES****Family SPHACELARIACEAE*****Sphacelaria cirrosa* (Roth) C. Agardh**

*Conferva cirrosa* Roth, 1800:214.

*Sphacelaria cirrosa* (Roth) C. Agardh, 1824:164.—Piccone, 1879:24; 1884:116.—Bornet, 1892:240.—Boergesen, 1926: 74.—Schiffner, 1926:308.—Funk, 1927:354.—Feldmann, 1931b:214; 1937:268; 1961:505.—Navarro and Uriarte, 1945:218.—Dao, 1957:168.—Riedl, 1963:49.—Seoane-Camba, 1965:76.—Ardre, 1970:258.—Gerloff and Geissler, 1971:749.—Güven and Östig, 1971:124.—Harotinidis and Tsekos, 1975:212.—Boudouresque and Perret, 1977:104.

DISTRIBUTION.—Tunisia (Tabarka); northeast-

ern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily, Adriatic Sea, Greece, Turkey, Algeria).

SPECIMENS STUDIED.—EGM 1: 515(US), 1191(NHA).

REMARKS.—Common; found in April epiphytic on *Cystoseira sedoides*.

### \**Sphacelaria furcigera* Kuetzing

*Sphacelaria furcigera* Kuetzing, 1855:27.—Boergesen, 1926: 72.—Papenfuss, 1968:31.—Boudouresque and Perret, 1977:105.

DISTRIBUTION.—Tunisia (Cap Serrat); northeastern Atlantic (Canary Islands); Mediterranean (Corsica); Red Sea; Indian Ocean.

SPECIMEN STUDIED.—EGM 2: 1184(US).

REMARKS.—Common; found in April epiphytic on *Cystoseira*.

### \**Sphacelaria tribuloides* Meneghini

*Sphacelaria tribuloides* Meneghini, 1840:[2].—Boergesen, 1926: 72.—Funk, 1927:353.—Hamel, 1939:xli.—Feldmann, 1937:268.—Navarro and Uriarte, 1945:217.—Aleem, 1951:251.—Papenfuss, 1968:31.—Lipkin and Safriel, 1971:7.—Gerloff and Geissler, 1971:749.—Giaccone et al., 1973, table iv.—Harotinidis and Tsekos, 1975:213.—Boudouresque and Perret, 1977:106.

DISTRIBUTION.—Tunisia (Tabarka, Hammamet); northeastern Atlantic (Portugal, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily, Greece, Israel, Egypt); Red Sea; Indian Ocean.

SPECIMENS STUDIED.—EGM 1: 516–518(US); 16: 519(NHA), 520(INSTOP).

REMARKS.—Occasional; found in April and September epiphytic on various algae.

## Family STYPOCAULACEAE

### *Halopteris filicina* (Grateloup) Kuetzing

*Ceramium filicinum* Grateloup, 1806:33.

*Halopteris filicina* (Grateloup) Kuetzing, 1843:292.—Bornet, 1892:239.—Petersen, 1918:8.—Funk, 1927:354.—Feld-

mann, 1931b:214; 1937:268; 1961:505.—Navarro and Uriarte, 1945:218.—Aleem, 1951:251.—Dao, 1957:169.—Riedl, 1963:49.—Edelstein, 1964:186.—Seoane-Camba, 1965:76.—Ardre, 1970:260.—Ben Alaya, 1970:209.—Furnari and Scammacca, 1970:219.—Gerloff and Geissler, 1971:749.—Güven and Östig, 1971:124.—Giaccone et al., 1973, table iv.—Harotinidis and Tsekos, 1975:212.—Boudouresque and Perret, 1977:103.

DISTRIBUTION.—Tunisia (Ile Plane, mouth of Madjerda, Sidi Bou Said); northeastern Atlantic (Portugal, Spain, Morocco); Mediterranean (Spain, France, Corsica, Italy, Sicily, Adriatic Sea, Greece, Turkey, Israel, Algeria, Egypt).

SPECIMENS STUDIED.—EGM 8: 316, 325–330; 9: 311–315, 317–320, 331; 13: 321–322(US), 323(NHA), 324(INSTOP).

REMARKS.—Common; found in October and December on rocks. Dredged from 15 to 57 m.

### *Halopteris scoparia* (Linnaeus) Sauvageau

*Conferva scoparia* Linnaeus, 1758:720.

*Halopteris scoparia* (Linnaeus) Sauvageau, 1907:506.—Petersen, 1918:8.—Boergesen, 1926:75.—Feldmann, 1931b: 214; 1937:268; 1961:505.—Hamel, 1938:263.—Nasr, 1940a:14.—Gayral, 1958:204.—Riedl, 1963:49.—Papenfuss, 1968:32.—Furnari and Scammacca, 1970:219.—Ardre, 1970:261.—Ben Alaya, 1970:209.—Gerloff and Geissler, 1971:749.—Güven and Östig, 1971:124.—Giaccone et al., 1973:112.—Harotinidis and Tsekos, 1975:212.—*Stypocaulon scoparium* Kuetzing, 1843:293.—Bornet, 1892: 238.—Funk, 1927: 355.—Navarro and Uriarte, 1945: 219.—Seoane-Camba, 1965:77.

DISTRIBUTION.—Tunisia (Cap Serrat, Tabarka, Cap Zebib, Bechateur, Ras Sidi Ali El Mekki, Bizerte, La Marsa, Sidi Bou Said, Nabeul, Hammamet, Monastir, Sousse, Djerba Island, El Bibane); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Italy, Sicily, Adriatic Sea, Greece, Turkey, Algeria, Libya, Egypt); Red Sea.

SPECIMENS STUDIED.—EGM 1: 336–338, 365; 2: 339, 351, 353, 1172, 1260; 3: 355, 375–386; 4: 349, 350; 5: 354, 1366, 1367; 7: 366; 12: 352, 356–358; 13: 359–364; 15: 369–374; 16: 367, 368; 17: 322; 18: 340–348(US); 24: 333–335(NHA); 29: 387(INSTOP).

REMARKS.—Abundant; found from February



to July and in September and October on rocks in the sublittoral zone.

### Family CLADOSTEPHACEAE

#### *Cladostephus verticillatus* (Lightfoot) Lyngbye

*Conferva verticillata* Lightfoot, 1777:984.

*Cladostephus verticillatus* (Lightfoot) Lyngbye, 1819:102.—Fremy, 1925:28.—Boergesen, 1926:75.—Funk, 1927:356.—Feldmann, 1931b:214; 1937:268; 1961:505.—Hamel, 1938:268.—Navarro and Uriarte, 1945:219.—Riedl, 1963:49.—Seoane-Camba, 1965:77.—Ardre, 1970:262.—Ben Alaya, 1970:209.—Furnari and Scammacca, 1970:218.—Gerloff and Geissler, 1971:750.—Güven and Östig, 1971:125.—Giaccone et al., 1973:112.—Harotinidis and Tsekos, 1975:211.

*Cladostephus verticillatus* J. Agardh, 1848:43.—Piccone, 1884:117.—Bornet, 1892:239.—DeToni, 1895:455.—Gayral, 1958:208.

DISTRIBUTION.—Tunisia (Cap Serrat, Cap Zebib, Bechateur, Raf Raf, mouth of Madjerda, La Marsa, Sidi Bou Said, Hammamet, Nabeul, Monastir); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Italy, Sicily, Adriatic Sea, Greece, Turkey, Algeria, Libya).

SPECIMENS STUDIED.—EGM 2: 1265, 1266; 3: 13–21, 27, 30; 6: 7, 24; 9: 8–12, 26; 12: 22; 13: 5, 6, 23; 15: 25, 29; 16: 28; 18: 1–4(US), 2029(NHA), 2031(INSTOP).

REMARKS.—Abundant; found in February, from April to July, and in September, October, and December.

### Order CUTLERIALES

#### Family CUTLERIACEAE

#### *Zanardinia prototypus* Nardo

*Zanardinia prototypus* Nardo, 1841:189.—Feldmann, 1937:268.—Aleem, 1951:251.—Dao, 1957:169.—Edelstein, 1962:213; 1964:187.—Ardre, 1970:263.—Furnari and Scammacca, 1970:218.—Ben Alaya, 1970:209.—Gerloff and Geissler, 1971:748.—Güven and Östig, 1971:125.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:109.

*Padina collaris* Montagne, 1846:33.

*Zanardinia collaris* Crouan and Crouan, 1867:168.—Bornet, 1892:231.

DISTRIBUTION.—Tunisia (Ile Plane); northeastern Atlantic (Portugal, Morocco); Mediterranean (France, Corsica, Sicily, Greece, Turkey, Israel, Egypt).

SPECIMEN STUDIED.—EGM 8: 545(US).

REMARKS.—Occasional; found in December on rocks. Dredged from 65 m.

### Order DICTYOTALES

#### Family DICTYOTACEAE

#### *Dictyopteris membranacea* (Stackhouse) Batters

*Fucus membranaceus* Stackhouse, 1801, pl. 13.

*Dictyopteris membranacea* (Stackhouse) Batters, 1902:54.—Feldmann, 1937:268; 1961:505.—Hamel, 1938:341.—Nasr, 1940b:15.—Aleem, 1951:251.—Dao, 1957:169.—Edelstein, 1964:188.—Papenfuss, 1968:32.—Ardre, 1970:267.—Furnari and Scammacca, 1970:219.—Ben Alaya, 1970:208.—Gerloff and Geissler, 1971:750.—Giaccone et al., 1973, table iv.—Harotinidis and Tsekos, 1975:212.—Boudouresque and Perret, 1977:110.

*Dictyopteris polypodioides* Lamouroux, 1809c:19.—Boergesen, 1926:95.—Feldmann, 1931b:217.—Navarro and Uriarte, 1945:225.—Riedl, 1963:51.—Seoane-Camba, 1965:84.—Güven and Östig, 1971:124.

*Haliseris polypodioides* C. Agardh, 1820:142.—Piccone, 1879:26; 1884:120.—Muschler, 1910:468.—Schiffner, 1926:306.

DISTRIBUTION.—Tunisia (Cap Serrat, Tabarka, Raf Raf, Ras Sidi Ali El Mekki, La Marsa, Gammarth, Sidi Bou Said, Monastir, Djerba Island); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily, Adriatic Sea, Greece, Turkey, Israel, Algeria, Egypt); Red Sea.

SPECIMENS STUDIED.—EGM 1: 182; 2: 176, 177; 7: 180; 11: 193, 195–197; 12: 181, 189–191, 194, 1609; 13: 178, 179, 198, 199; 18: 193–196, 192(US); 24: 187(NHA), 188(INSTOP).

REMARKS.—Abundant; found throughout the year on rocks in the sublittoral zone.

### *Dictyota dichotoma* (Hudson) Lamouroux

*Ulva dichotoma* Hudson, 1762:476.

*Dictyota dichotoma* (Hudson) Lamouroux, 1809a:331.—Muschler, 1910:301.—Fremy, 1925:28.—Boergesen, 1926:84.—Funk, 1927:361.—Feldmann, 1931b:216; 1937:268; 1961:505.—Hamel, 1939:347.—Navarro and Uriarte, 1945:226.—Nasr and Aleem, 1949:270.—Dao, 1957:169.—Gayral, 1958:218.—Riedl, 1963:51.—Edelstein, 1962:213; 1964:188.—Seoane-Camba, 1965:85.—Papenfuss, 1968:32.—Ardre, 1970:268.—Ben Alaya, 1970:208.—Furnari and Scammacca, 1970:219.—Gerloff and Geissler, 1971:750.—Güven and Östig, 1971:124.—Giaccone et al., 1973, table iv.—Harotinidis and Tsekos, 1975:211.—Boudouresque and Perret, 1977:111.

DISTRIBUTION.—Tunisia (Cap Serrat, Cap Zebib, Gammarth, La Marsa, Sidi Bou Said, Nabeul, Monastir, Sousse, Djerba Island, El Bibane); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, Corsica, Italy, Sicily, Greece, Turkey, Israel, Algeria, Libya, Egypt); Indian Ocean.

SPECIMENS STUDIED.—EGM 2: 118, 119, 217–219, 1259, 1261, 1267; 3: 273; 5: 233, 234; 11: 227; 12: 228, 230, 232, 235–244; 13: 229; 15: 223–226, 231; 17: 203, 204, 206, 216; 18: 200–202, 207–214; 24: 205, 274, 275; 29: 215(US), 220(NHA), 221–222(INSTOP).

REMARKS.—Abundant; found throughout the year on rocks in the sublittoral zone.

### *Dictyota linearis* (C. Agardh) Greville

*Zonaria linearis* C. Agardh, 1820:134.

*Dictyota linearis* (C. Agardh) Greville, 1830:xlili.—Piccone, 1879:25; 1884:118.—Muschler, 1910:301.—Petersen, 1918:8.—Boergesen, 1926:85.—Schiffner, 1926:306.—Funk, 1927:363.—Feldmann, 1931b:217; 1961:505.—Navarro and Uriarte, 1945:226.—Aleem, 1951:251.—Dao, 1957:169.—Edelstein, 1964:189.—Furnari and Scammacca, 1970:219.—Gerloff and Geissler, 1971:751.—Güven and Östig, 1971:124.—Giaccone et al., 1973, table iv.—Harotinidis and Tsekos, 1975:212.—Boudouresque and Perret, 1977:113.

DISTRIBUTION.—Tunisia (Tabarka, Bechateur,

Bizerte, Ras Sidi Ali El Mekki, Korbous, Hamamet, Monastir, Sousse, Kerkenna Island, Djerba Island); northeastern Atlantic (Morocco, Canary Islands); Mediterranean (Spain, Corsica, Italy, Sicily, Greece, Turkey, Israel, Algeria, Libya, Egypt); Indian Ocean.

SPECIMENS STUDIED.—EGM 1: 249–251; 2: 1191, 1192; 3: 262, 269; 7: 265; 14: 263, 264, 266–268; 16: 261; 18: 253–259; 21: 260, 270–272(US); 24: 246–247(NHA), 248(INSTOP).

REMARKS.—Abundant; found from April to July and in September, October, and December on rocks or entangled amongst other algae in the sublittoral zone.

### *Dilophus fasciola* (Roth) Howe

*Fucus fasciola* Roth, 1800:146.

*Dictyota fasciola* (Roth) Lamouroux, 1809d:14.—Muschler, 1910:301.—Güven and Östig, 1971:124.

*Dilophus fasciola* (Roth) Howe, 1914:72.—Boergesen, 1926:82.—Funk, 1955:50.—Feldmann, 1931b:217; 1937:269; 1961:505.—Hamel, 1939:351.—Dao, 1957:139.—Gayral, 1958:224.—Seoane-Camba, 1965:85.—Papenfuss, 1968:33.—Ardre, 1970:269.—Ben Alaya, 1970:210.—Gerloff and Geissler, 1971:751.—Lipkin and Safriel, 1971:9.—Giaccone et al., 1973, table iii.—Boudouresque and Perret, 1977:114.

DISTRIBUTION.—Tunisia (Bechateur, Ras Sidi Ali El Mekki, Nabeul); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (France, Corsica, Italy, Sicily, Greece, Israel, Algeria, Libya); Red Sea.

SPECIMENS STUDIED.—EGM 3: 278–280; 7: 276, 277; 15: 281(US); 25: 292–293(NHA), 294–295(INSTOP).

REMARKS.—Occasional; found in June, July, September, and December on rocks in the sublittoral zone.

### *Dilophus spiralis* (Montagne) Hamel

*Dictyota spiralis* Montagne, 1846:29.

*Dilophus spiralis* (Montagne) Hamel, 1939:352.—Ardre, 1970:269.—Gerloff and Geissler, 1971:752.—Lipkin and Safriel, 1979:9.—Harotinidis and Tsekos, 1975:212.

*Dictyota ligulata* Kuetzing, 1847:53.—Feldmann, 1931b:216.  
*Dilophus ligulatus* Feldmann, 1937:269.—Nasr, 1940a:4.



**DISTRIBUTION.**—Tunisia (Bechateur, Raf Raf, Nabeul, Monastir, Djerba Island); northeastern Atlantic (Portugal); Mediterranean (Greece, Israel, Algeria, Egypt).

**SPECIMENS STUDIED.**—EGM 3: 285–288; 6: 289; 15: 290; 18: 282–283(US), 284(NHA); 25: 291(INSTOP).

**REMARKS.**—Common; found from March to May and in July, September, October, and December on rocks in the sublittoral zone.

### ***Padina pavonica* (Linnaeus) Thivy**

*Fucus pavonicus* Linnaeus, 1753:1162.

*Padina pavonica* (Linnaeus) Thivy in Taylor, 1960:234.—Papenfuss, 1968:34.

*Padina pavonia* (Linnaeus) Gaillon, 1828:371.—Piccone, 1879:26; 1884:119.—Bornet, 1892:230.—Fremy, 1925:28.—Boergesen, 1926:86.—Schiffner, 1926:306.—Pottier, 1929:322.—Feldmann, 1931b:217; 1937:268; 1961:505.—Hamel, 1939:341.—Nasr, 1940b:14.—Nasr and Aleem, 1949:272.—Aleem, 1951:251.—Dao, 1957:169.—Gayral, 1958:230.—Riedl, 1963:51.—Edelstein, 1964:188.—Seoane-Camba, 1965:82.—Ardre, 1970:267.—Furnari and Scammacca, 1970:219.—Gerloff and Geissler, 1971:752.—Güven and Östig, 1971:124.—Harotinidis and Tsekos, 1975:212.

*Padina pavonia* (Linnaeus) Lamouroux, 1816:304.—Muschler, 1910:302.—Funk, 1927:365.—Navarro and Uriarte, 1945:224.—Ben Alaya, 1970:208.

**DISTRIBUTION.**—Tunisia (Cap Serrat, Cap Zebib, Bechateur, Tabarka, Raf Raf, Ras Sidi Ali El Mekki, La Marsa, Korbous, Nabeul, Hammamet, Gammarth, Monastir, Djerba Island, Kerkenna Island, Zarzis, El Bibane); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Italy, Adriatic Sea, Greece, Turkey, Israel, Algeria, Libya, Egypt); Red Sea; Indian Ocean.

**SPECIMENS STUDIED.**—EGM 1: 462–464; 2: 446, 461, 478; 3: 417–421; 5: 468; 6: 392, 393; 7: 391; 11: 406–408, 465, 466; 12: 467, 470, 471, 473–478; 13: 388; 14: 401–405; 15: 395–400, 414–416; 16: 394; 18: 435, 436, 438, 448, 449, 453–457; 25: 389, 390, 469; 26: 429–431, 440–442, 447, 458, 459; 27: 460; 28: 427, 428, 437, 439(US); 29: 450–452(NHA), 472(INSTOP).

**REMARKS.**—Abundant; found from February to October on rocks in the sublittoral zone.

### **\**Spatoglossum schroederi* (C. Agardh) Kuetzing**

*Zonaria schroederi* C. Agardh, 1824:265.

*Spatoglossum schroederi* (C. Agardh) Kuetzing, 1859:21.

**DISTRIBUTION.**—Tunisia (Djerba Island); Indian Ocean.

**SPECIMENS STUDIED.**—EGM 24: 504(US), 505(NHA), 506(INSTOP).

**REMARKS.**—Rare; found in May on rocks in the sublittoral zone.

### ***Taonia atomaria* (Woodward) J. Agardh**

*Ulva atomaria* Woodward, 1797:53.

*Taonia atomaria* (Woodward) J. Agardh, 1848:101.—Bornet, 1892:229.—Muschler, 1910:302.—Boergesen, 1926:89.—Funk, 1927:364.—Feldmann, 1931b:217; 1937:268; 1961:505.—Hamel, 1939:337.—Aleem, 1951:251.—Gayral, 1958:232.—Riedl, 1963:51.—Seoane-Camba, 1965:82.—Ardre, 1970:266.—Gerloff and Geissler, 1971:753.—Harotinidis and Tsekos, 1975:213.—Boudouresque and Perret, 1977:118.

**DISTRIBUTION.**—Tunisia (Bechateur, Raf Raf, La Marsa, Gammarth); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (France, Corsica, Italy, Adriatic Sea, Greece, Algeria, Libya, Egypt).

**SPECIMENS STUDIED.**—EGM 3: 536; 6: 537, 538; 11: 527, 529–532; 12: 528, 539–544(US); 15: 533–534(NHA), 535(INSTOP).

**REMARKS.**—Common; found from March to May and in July and September on rocks in the sublittoral zone.

### ***Zonaria tournefortii* (Lamouroux) Montagne**

*Fucus tournefortii* Lamouroux, 1805:44.

*Zonaria tournefortii* (Lamouroux) Montagne, 1846:32.—Bornet, 1892:230.—Boergesen, 1926:92.—Feldmann, 1931b:217; 1961:505.—Hamel, 1939:338.—Navarro and Uriarte, 1945:224.—Gayral, 1958:225.—Furnari and Scammacca, 1970:219.—Gerloff and Geissler, 1971:753.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:118.

*Zonaria flava* (Clemente) C. Agardh, 1820:140.—Piccone, 1879:26; 1884:119.—Muschler, 1910:302.—Funk, 1927:366.

DISTRIBUTION.—Tunisia (Ile Plane, Mouth of Madjerda); northeastern Atlantic (Spain, Morocco, Canary Islands); Mediterranean (Spain, Corsica, Italy, Sicily, Greece, Algeria, Libya); Indian Ocean.

SPECIMENS STUDIED.—EGM 8: 550; 9: 551(US); 11: 546–547(NHA), 548–549(INSTOP).

REMARKS.—Occasional; found in December. Dredged from 71 to 75 m.

## Order CHORDARIALES

### Family STILOPHORACEAE

#### *Stilophora rhizodes* (Turner) J. Agardh

*Fucus rhizodes* Turner, 1819:92.

*Stilophora rhizodes* (Turner) J. Agardh, 1841:6.—Piccone, 1879:25; 1884:118.—Papenfuss, 1968:38.—Gerloff and Geissler, 1971:746.

*Stilophora rhizodes* (Ehrenberg) J. Agardh, 1841:6.—Fremy, 1925:28.—Schiffner, 1926:310.—Feldmann, 1937:267; 1961:505.—Nasr, 1940b:10.—Navarro and Uriarte, 1945:215.—Riedl, 1963:53.—Güven and Östig, 1971:125.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:120.

DISTRIBUTION.—Tunisia (Djerba Island); Mediterranean (Spain, France, Corsica, Italy, Sicily, Adriatic Sea, Greece, Turkey, Libya, Egypt); Red Sea.

SPECIMENS STUDIED.—EGM 24: 521–524(US), 526(NHA); 29: 525(INSTOP).

REMARKS.—Occasional; found in March epiphytic on other algae.

### Family SPERMATOCNACEAE

#### *Spermatocnus paradoxus* (Roth) Kuetzing

*Conserva paradoxa* Roth, 1800:172.

*Spermatocnus paradoxus* (Roth) Kuetzing, 1845:268.—Funk, 1955:37.—Feldmann, 1937:267; 1961:505.—Riedl, 1963:53.—Edelstein, 1964:185.—Gerloff and Geissler, 1971:746.—Güven and Östig, 1971:125.

DISTRIBUTION.—Tunisia (Kerkenna Island);

Mediterranean (France, Italy, Adriatic Sea, Greece, Turkey, Israel, Algeria).

SPECIMENS STUDIED.—EGM 20: 507–512(US), 513(NHA), 514(INSTOP).

REMARKS.—Rare; found in April on rocks in the sublittoral zone.

## Family CHORDARIACEAE

### *Myrionema strangulans* Greville

*Myrionema strangulans* Greville, 1827, pl. 300.—Hamel, 1935:88.—Navarro and Uriarte, 1945:213.—Feldmann, 1961:504.—Ardre, 1970:249.—Gerloff and Geissler, 1971:744.—Boudouresque and Perret, 1977:120.

DISTRIBUTION.—Tunisia (Bechateur); northeastern Atlantic (Portugal); Mediterranean (Spain, France, Corsica, Algeria, Libya).

SPECIMENS STUDIED.—EGM 3: 946–947(US), 948(NHA), 1295(INSTOP).

REMARKS.—Rare; found in May endophytic in *Enteromorpha compressa*.

## Order SCYTOSIPHONALES

### Family PUNCTARIACEAE

#### *\*Punctaria latifolia* Greville

*Punctaria latifolia* Greville, 1830:52.—Funk, 1927:348.—Feldmann, 1937:267.—Riedl, 1963:54.—Güven and Östig, 1971:124.—Harotinidis and Tsekos, 1975:212.—Boudouresque and Perret, 1977:100.

DISTRIBUTION.—Tunisia (La Marsa); Mediterranean (France, Corsica, Italy, Greece, Turkey).

SPECIMENS STUDIED.—EGM 12: 480(US), 489(NHA), 491(INSTOP).

REMARKS.—Occasional; found from January to July epiphytic on *Cymodocea nodosa*.

## Family SCYTOSIPHONACEAE

### *Colpomenia sinuosa* (Mertens ex Roth) Derbes and Solier

*Ulva sinuosa* Mertens ex Roth, 1806:327.

*Colpomenia sinuosa* (Mertens ex Roth) Derbes and Solier, 1856:



11.—Bornet, 1892:249.—Boergesen, 1926:70.—Funk, 1927:352.—Feldmann, 1931b:213; 1937:267; 1961:505.—Nasr, 1940b:12.—Navarro and Uriarte, 1945:216.—Aleem, 1951:251.—Gayral, 1958:213.—Edelstein, 1964:186.—Seoane-Camba, 1965:74.—Papenfuss, 1968:38.—Ardre, 1970:273.—Furnari and Scammacca, 1970:219.—Gerloff and Geissler, 1971:747.—Güven and Östig, 1971:125.—Giaccone et al., 1973, table iv.—Harotinidis and Tsekos, 1975:211.—Boudouresque and Perret, 1977:95.

**DISTRIBUTION.**—Tunisia (Cap Serrat, Cap Zebib, Tabarka, Bizerte, La Marsa, Bechateur, Sidi Bou Said, Nabeul, Monastir); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily, Adriatic Sea, Greece, Turkey, Israel, Algeria, Libya, Egypt); Red Sea; Indian Ocean.

**SPECIMENS STUDIED.**—EGM 1: 37, 1229; 2: 33–36, 1264, 1290; 3: 41–43, 45; 4: 40; 5: 47; 12: 44, 46, 48; 15: 49; 18: 38–39(US), 2027(NHA), 2028(INSTOP).

**REMARKS.**—Common; found from February to May and in July on rocks and occasionally epiphytic on various algae.

### ***Scytosiphon lomentaria* (Lyngbye) Endlicher**

*Chorda lomentaria* Lyngbye, 1819:74.

*Scytosiphon lomentaria* (Lyngbye) Endlicher, 1843:25.—Bornet, 1892:249.—DeToni and Forti, 1914:291.—Boergesen, 1926:67.—Feldmann, 1931b:213; 1937:267.—Hamel, 1937:194.—Nasr, 1940b:12.—Navarro and Uriarte, 1945:215.—Riedl, 1963:55.—Seoane-Camba, 1965:72.—Papenfuss, 1968:39.—Ardre, 1970:270.—Gerloff and Geissler, 1971:747.—Güven and Östig, 1971:125.—Lipkin and Safriel, 1971:8.—Harotinidis and Tsekos, 1975:212.—Boudouresque and Perret, 1977:101.

**DISTRIBUTION.**—Tunisia (Cap Serrat, Nabeul); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Adriatic Sea, Greece, Turkey, Israel, Algeria, Libya, Egypt); Red Sea; Indian Ocean.

**SPECIMENS STUDIED.**—EGM 2: 495–498; 5: 499, 500; 15: 501(US), 502(NHA), 503(INSTOP).

**REMARKS.**—Occasional; found from February

to April and in July on rocks in the sublittoral zone.

## **Order FUCALES**

### **Family CYSTOSEIRACEAE**

#### ***Cystoseira barbata* (Goodenough and Woodward) J. Agardh**

*Fucus barbatus* Goodenough and Woodward, 1797:128.

*Cystoseira barbata* (Goodenough and Woodward) J. Agardh, 1842:50.—Schiffner, 1926:304.—Funk, 1927:371.—Feldmann, 1937:269.—Hamel, 1939:392.—Navarro and Uriarte, 1945:228.—Riedl, 1963:55.—Ardre, 1970:317.—Ben Alaya, 1970:200.—Gerloff and Geissler, 1971:754.—Güven and Östig, 1971:124.—Harotinidis and Tsekos, 1975:211.

**DISTRIBUTION.**—Tunisia (Bechateur, Gammarth, Sidi Bou Said, Korbous); northeastern Atlantic (Portugal); Mediterranean (Spain, France, Italy, Adriatic Sea, Greece, Turkey, Libya).

**SPECIMENS STUDIED.**—EGM 3: 61; 11: 63, 64; 13: 52; 14: 56–60; 24: 2139–2141(US); 29: 54(NHA), 55(INSTOP).

**REMARKS.**—Common; found in March, May, June, July, and October on rocks in the sublittoral zone.

#### ***Cystoseira compressa* (Esper) Gerloff and Nizamuddin**

*Fucus compressus* Esper, 1799:152.

*Cystoseira compressa* (Esper) Gerloff and Nizamuddin, 1975:342.

*Cystoseira fimbriata* (Desfontaines) Bory, 1832:318.—Hamel, 1939:418.—Dao, 1957:169.—Gayral, 1958:260.—Seoane-Camba, 1965:90.—Gerloff and Geissler, 1971:755.—Giaccone et al., 1973, table iv.—Harotinidis and Tsekos, 1975:211.

*Cystoseira abrotanifolia* J. Agardh, 1842:52.—Piccone, 1879:27; 1884:122.—Bornet, 1892:257.—Muschler, 1910:300.—Boergesen, 1926:104.—Funk, 1927:369.—Feldmann, 1931b:221; 1937:269.—Navarro and Uriarte, 1945:230.—Riedl, 1963:57.—Güven and Östig, 1971:124.—Lipkin and Safriel, 1971:15.

**DISTRIBUTION.**—Tunisia (Cap Zebib, Tabarka, Bechateur, Bizerte, Gammarth, La Marsa, Na-

beul, Monastir, Kerkenna Island, Djerba Island); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily).

SPECIMENS STUDIED.—EGM 1: 92; 3: 102–104; 4: 98; 5: 93–94; 11: 89, 91, 95, 105, 106; 12: 96, 97; 13: 77; 15: 90; 20: 2062, 2065(US), 24: 99–100(NHA), 101(INSTOP).

REMARKS.—Common; found from February to May and in July and November on rocks in the sublittoral zone.

### *Cystoseira discors* C. Agardh

*Cystoseira discors* C. Agardh, 1828:62.—Muschler, 1910: 300.—Boergesen, 1926:103.—Feldmann, 1931b:221; 1937:269; 1961:506.—Navarro and Uriarte, 1945:230.—Riedl, 1963:57.—Seoane-Camba, 1965:91.—Gerloff and Geissler, 1971:755.—Güven and Östig, 1971:124.—Harotinidis and Tsekos, 1975:211.

DISTRIBUTION.—Tunisia (Raf Raf, La Marsa, Sidi Bou Said, Kerkenna Island, Djerba Island); northeastern Atlantic (Spain, Canary Islands); Mediterranean (Spain, France, Italy, Adriatic Sea, Greece, Turkey, Libya).

SPECIMENS STUDIED.—EGM 6: 71, 73–75; 12: 72; 21: 65, 68–69(US), 70(NHA); 24: 76 (INSTOP).

REMARKS.—Occasional; found in March, July, September, and October on rocks in the sublittoral zone.

### *Cystoseira mediterranea* Sauvageau

*Cystoseira mediterranea* Sauvageau, 1912:209.—Funk, 1927: 370.—Feldmann, 1937:269.—Navarro and Uriarte, 1945: 228.—Gayral, 1958:264.—Ben Alaya, 1970:208.—Gerloff and Geissler, 1971:756.—Furnari and Scammacca, 1973: 9.

DISTRIBUTION.—Tunisia (Cap Zebib, Becha-teur, La Marsa); northeastern Atlantic (Morocco); Mediterranean (Spain, France, Italy, Greece, Sicily).

SPECIMENS STUDIED.—EGM 3: 108; 5: 107(US); 12: 109(NHA), 100(INSTOP).

REMARKS.—Occasional; found in February, July, and August on rocks in the sublittoral zone.

### \**Cystoseira myriophylloides* Sauvageau

*Cystoseira myriophylloides* Sauvageau, 1912:323.—Gayral, 1958:258.—Seoane-Camba, 1965:91.—Giaccone et al., 1973:112.—Harotinidis and Tsekos, 1975:211.

DISTRIBUTION.—Tunisia (Raouad, La Marsa); northeastern Atlantic (Spain, Morocco); Mediterranean (Sicily, Greece).

SPECIMENS STUDIED.—EGM 10: 111(US); 12: 112(NHA), 1731(INSTOP).

REMARKS.—Occasional; found from February to March on rocks in the sublittoral zone.

### \**Cystoseira sauvageauiana* Hamel

*Cystoseira sauvageauiana* Hamel, 1939:399.  
*Cystoseira crinita* (Desfontaines) Bory, 1832:320.—Gerloff and Geissler, 1971:757.—Giaccone et al., 1973:112.

DISTRIBUTION.—Tunisia (Bizerte, Raf Raf, Djerba Island); Mediterranean (Sicily, Greece).

SPECIMENS STUDIED.—EGM 4: 119, 120; 6: 121a–121b, 122, 123; 26: 113–116(US), 117 (NHA), 118(INSTOP).

REMARKS.—Common; found in May, September, and October on rocks in the sublittoral zone.

### *Cystoseira schiffneri* Hamel

*Cystoseira schiffneri* Hamel, 1939:421.—Feldmann, 1951:107.  
*Cystoseira acanthophora* Schiffner, 1926:305.

DISTRIBUTION.—Tunisia (Kerkenna Island, Djerba Island, El Bibane).

SPECIMENS STUDIED.—EGM 19: 124; 20: 128–132; 21: 153–156; 23: 127, 135, 138, 144; 125, 137, 146–150; 26: 141, 142, 151–152; 29: 126, 133–134 (US), 143(NHA), 145(INSTOP).

REMARKS.—Abundant; found from March to July and in October on rocks in the sublittoral zone.

### *Cystoseira sedoides* (Desfontaines) C. Agardh

*Fucus sedoides* Desfontaines, 1799:423.  
*Cystoseira sedoides* (Desfontaines) C. Agardh, 1820:53.—Feldmann, 1931a:7; 1931b:219.—Hamel, 1939:394.—Giaccone et al., 1973:115.

DISTRIBUTION.—Tunisia (Cap Serrat, Cap Zebib, Bechateur, Bizerte, Monastir); Mediterranean (Sicily, Algeria).

SPECIMENS STUDIED.—EGM 1: 158; 2: 165, 166, 168–170, 1257; 3: 167, 171–175; 5: 160–163(US); 18: 157(NHA), 164(INSTOP).

REMARKS.—Common; found in February, April, May, and June on rocks in the sublittoral zone.

### Family SARGASSACEAE

#### *Sargassum linifolium* (Turner) C. Agardh

*Fucus linifolius* Turner, 1811:84.

*Sargassum linifolium* (Turner) C. Agardh, 1820:18.—Bornet, 1892:258.—Fremy, 1925:28.—Funk, 1927:367.—Feldmann, 1931b:218; 1937:269.—Nasr, 1940b:15.—Navarro and Uriarte, 1945:232.—Aleem, 1951:251.—Riedl, 1963:59.—Güven and Östig, 1971:124.

DISTRIBUTION.—Tunisia (Djerba Island); northeastern Atlantic (Morocco); Mediterranean (Spain, France, Italy, Adriatic Sea, Turkey, Algeria, Egypt); Red Sea.

SPECIMEN STUDIED.—EGM 24: 493(US).

REMARKS.—Rare; found in May as drift material.

#### *Sargassum vulgare* C. Agardh

*Sargassum vulgare* C. Agardh, 1820:3.—Bornet, 1892:258.—Boergesen, 1926:106.—Feldmann, 1937:269; 1961:506.—Navarro and Uriarte, 1945:232.—Aleem, 1951:251.—Gayral, 1958:272.—Riedl, 1963:58.—Edelstein, 1964:190.—Seoane-Camba, 1965:92.—Ben Alaya, 1970:209.—Gerloff and Geissler, 1971:758.—Güven and Östig, 1971:124.—Giaccone et al., 1973:111.—Boudouresque and Perret, 1977:128.

DISTRIBUTION.—Tunisia (Djerba Island); northeastern Atlantic (Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Sicily, Adriatic Sea, Greece, Turkey, Israel, Egypt); Indian Ocean.

SPECIMEN STUDIED.—EGM 24: 494(US).

REMARKS.—Rare; found in May as drift material.

### Division CHLOROPHYTA

### Class CHLOROPHYCEAE

### Order ULVALES

### Family MONOSTROMATACEAE

#### \**Blidingia marginata* (J. Agardh) Dangeard

*Enteromorpha marginata* J. Agardh, 1842:16.

*Blidingia marginata* (J. Agardh) Dangeard, 1958:347.—Seoane-Camba, 1965:57.—Ardre, 1970:343.—Gerloff and Geissler, 1971:728.

DISTRIBUTION.—Tunisia (Cap Serrat); north-eastern Atlantic (Portugal, Spain); Mediterranean (Greece).

SPECIMENS STUDIED.—EGM 2: 597–600(US), 601–602(NHA), 603(INSTOP).

REMARKS.—Rare; found in April on rocks in the high littoral zone.

### Family ULVACEAE

#### \**Enteromorpha clathrata* (Roth) Greville

*Conserva clathrata* Roth, 1806:175.

*Enteromorpha clathrata* (Roth) Greville, 1830:181.—Boergesen, 1925:10.—Ardre, 1970:345.—Gerloff and Geissler, 1971:728.—Harotinidis and Tsekos, 1975:210.

*Enteromorpha clathrata* (Roth) J. Agardh, 1883:153.—Funk, 1927:312.—Hamel, 1931a:67.—Feldmann, 1937:263.—Aleem, 1951:251.—Rayss, 1955:10.—Seoane-Camba, 1965:54.—Güven and Östig, 1971:121.—Boudouresque and Perret, 1977:130.

DISTRIBUTION.—Tunisia (Tabarka, La Marsa, Sidi Bou Said, El Bibane); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (France, Corsica, Italy, Greece, Turkey, Israel, Libya, Egypt); Red Sea; Indian Ocean.

SPECIMENS STUDIED.—EGM 12: 917; 13: 931, 932; 15: 916, 1905; 18: 915, 930; 19: 921–927; 24: 928–929(US); 29: 919(NHA), 2291(INSTOP).

REMARKS.—Common; found from February to May and in September and December on rocks and epiphytic on various algae and *Cymodocea nodosa*.



***Enteromorpha compressa* (Linnaeus) Greville**

*Ulva compressa* Linnaeus, 1755:433.

*Enteromorpha compressa* (Linnaeus) Greville, 1830:180.—Bornet, 1892:199.—Patouillard, 1897:18.—Muschler, 1910:295.—Boergesen, 1925:12.—Freymy, 1925:28.—Funk, 1927:312.—Feldmann, 1931b:202; 1937:263.—Nasr, 1940b:4.—Navarro and Uriarte, 1945:201.—Rayss, 1955:8.—Gayral, 1958:154.—Seoane-Camba, 1965:54.—Ben Alaya, 1970:207.—Gerloff and Geissler, 1971:728.—Güven and Östig, 1971:121.—Harotinidis and Tsekos, 1975:210.—Boudouresque and Perret, 1977:130.

DISTRIBUTION.—Tunisia (Raouad); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Greece, Turkey, Israel, Algeria, Libya, Egypt); Red Sea; Indian Ocean.

SPECIMENS STUDIED.—EGM 1: 1225–1227; 2: 1134; 10: 933–935, 1515–1517, 1525; 12: 1734, 1735, 1742, 15: 938, 942, 1906; 16: 1935, 1936; 17: 1965–1967; 18: 2013–2015, 2019–2021(US); 29: 2289(NHA), 2290(INSTOP).

REMARKS.—Abundant; found in March, August, and September on rocks and epiphytic on various algae and *Cymodocea nodosa*.

***Enteromorpha flexuosa* (Roth)  
J. Agardh**

*Conferva flexuosa* Roth, 1800:188.

*Enteromorpha flexuosa* (Roth) J. Agardh, 1883:126.—Bornet, 1892:197.—Feldmann, 1931b:202; 1937:263.—Rayss, 1955:9.—Ardre, 1970:345.—Gerloff and Geissler, 1971:728.

DISTRIBUTION.—Tunisia (Raouad, Sidi Bou Said, Hammamet, Nabeul, Djerba Island); northeastern Atlantic (Morocco); Mediterranean (France, Greece, Israel, Algeria); Red Sea; Indian Ocean.

SPECIMENS STUDIED.—EGM 13: 943; 16: 936, 937, 939, 944(US), 1942(NHA); 24: 945(INSTOP).

REMARKS.—Common; found in March, July, and September epiphytic on various algae and *Cymodocea nodosa*.

***Enteromorpha intestinalis* (Linnaeus) Link**

*Ulva intestinalis* Linnaeus, 1753:1163.

*Enteromorpha intestinalis* (Linnaeus) Link, 1820:5.—Bornet, 1892:198.—Patouillard, 1897:17.—Muschler, 1910:294.—Petersen, 1918:5.—Boergesen, 1925:13.—Freymy, 1925:28.—Feldmann, 1937:263.—Navarro and Uriarte, 1945:201.—Rayss, 1955:9.—Gayral, 1958:156.—Riedl, 1963:38.—Seoane-Camba, 1965:56.—Ardre, 1970:347.—Ben Alaya, 1970:207.—Gerloff and Geissler, 1971:728.—Güven and Östig, 1971:121.—Furnari and Scammacca, 1973:6.—Harotinidis and Tsekos, 1975:210.—Boudouresque and Perret, 1977:131.

DISTRIBUTION.—Tunisia (Bechateur, Djerba Island); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Adriatic Sea, Greece, Turkey, Israel, Libya); Red Sea; Indian Ocean.

SPECIMENS STUDIED.—EGM 1: 1222–1224; 2: 1136; 3: 1337–1339; 4: 1351; 5: 1335; 6: 1382; 7: 1389; 10: 1523–1524; 12: 1743; 13: 1820; 16: 1930–1933(US), 1934(NHA); 24: 194(INSTOP).

REMARKS.—Abundant; found in March and May and from July to September on rocks and occasionally epiphytic on various algae and *Cymodocea nodosa*.

***Enteromorpha linza* (Linnaeus) J. Agardh**

*Ulva linza* Linnaeus, 1753:1133.

*Enteromorpha linza* (Linnaeus) J. Agardh, 1883:134.—Muschler, 1910:294.—Schiffner, 1926:310.—Funk, 1927:312.—Feldmann, 1937:263; 1961:504.—Nasr, 1940b:3.—Navarro and Uriarte, 1945:201.—Rayss, 1955:10.—Gayral, 1958:159.—Feldmann, 1931b:202; 1961:504.—Seoane-Camba, 1965:57.—Furnari and Scammacca, 1970:217.—Gerloff and Geissler, 1971:729.—Güven and Östig, 1971:121.—Harotinidis and Tsekos, 1975:210.—Boudouresque and Perret, 1977:131.

DISTRIBUTION.—Tunisia (Gammarth, La Marsa); northeastern Atlantic (Portugal, Spain, Morocco); Mediterranean (Spain, France, Corsica, Italy, Greece, Turkey, Israel, Algeria, Libya, Egypt).

SPECIMENS STUDIED.—EGM 1: 1228; 2: 1252–1254; 11: 950–954; 12: 1736–1741; 13: 1818, 1819; 15: 1897–1904; 18: 2022–2024(US), 2025(NHA), 2026(INSTOP).

REMARKS.—Common; found in May, June, and September on rocks and occasionally epiphytic on various algae and *Cymodocea nodosa*.

**\**Enteromorpha prolifera* (Mueller) J. Agardh**

*Ulva prolifera* Mueller, 1778, pl. 763.

*Enteromorpha prolifera* (Mueller) J. Agardh, 1883:129.—Schiffner, 1926:310.—Rayss, 1955:9.—Seoane-Camba, 1965:58.—Ardre, 1970:344.—Gerloff and Geissler, 1971:729.—Güven and Östig, 1971:121.

DISTRIBUTION.—Tunisia (Tabarka); northeastern Atlantic (Portugal, Spain); Mediterranean (Greece, Turkey, Israel); Indian Ocean.

SPECIMEN STUDIED.—EGM 1: 920(US).

REMARKS.—Rare; found in April on rocks.

**\**Enteromorpha ramulosa* (J. E. Smith)  
Carmichael in Hooker**

*Ulva ramulosa* J. E. Smith, 1810, pl. 2137.

*Enteromorpha ramulosa* (J. E. Smith) Carmichael in Hooker, 1833:315.—Bornet, 1892:200.—Boergesen, 1925:11.—Feldmann, 1937:263.—Seoane-Camba, 1965:58.—Gerloff and Geissler, 1971:729.—Güven and Östig, 1971:121.—Boudouresque and Perret, 1977:131.

DISTRIBUTION.—Tunisia (Monastir); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (France, Corsica, Greece, Turkey); Indian Ocean.

SPECIMEN STUDIED.—EGM 18: 955(US).

REMARKS.—Rare; found in April on rocks.

***Ulva lactuca* Linnaeus**

*Ulva lactuca* Linnaeus, 1753:1163.—Boergesen, 1925:14.—Fremy, 1925:28.—Funk, 1927:311.—Feldmann, 1937:263; 1961:504.—Navarro and Uriarte, 1945:199.—Nasr and Aleem, 1949:276.—Aleem, 1951:251.—Rayss, 1955:11.—Gayral, 1958:145.—Riedl, 1963:38.—Seoane-Camba, 1965:53.—Ardre, 1970:333.—Gerloff and Geissler, 1971:730.—Harotinidis and Tsekos, 1975:210.

DISTRIBUTION.—Tunisia (Cap Zebib, Tabarka, Bechateur, Raf Raf, Ras Sidi Ali El Mekki, La Marsa, Sidi Bou Said, Nabeul, Hammamet, Monastir, Sousse); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediter-

anean (Spain, France, Italy, Adriatic Sea, Greece, Turkey, Israel, Libya, Egypt); Indian Ocean.

SPECIMENS STUDIED.—EGM 1: 1124, 1125; 3: 1135; 6: 1141; 7: 1143; 12: 1147; 13: 1131; 15: 1137; 16: 1136; 17: 1123(US), 1130(NHA); 18: 1126(INSTOP).

REMARKS.—Abundant; found year round on rocks and epiphytic on *Cymodocea nodosa*.

**\**Ulva rigida* C. Agardh**

*Ulva rigida* C. Agardh, 1822:410.—Bornet, 1892:193.—Feldmann, 1937:263.—Aleem, 1951:251.—Rayss, 1955:11.—Funk, 1955:9.—Gayral, 1958:148.—Ardre, 1970:335.—Furnari and Scammacca, 1970:217.—Gerloff and Geissler, 1971:730.—Giaccone et al., 1973:110.—Harotinidis and Tsekos, 1975:210.—Boudouresque and Perret, 1977:132.

DISTRIBUTION.—Tunisia (Gammarth, La Marsa, Hammamet); northeastern Atlantic (Portugal, Morocco); Mediterranean (France, Corsica, Italy, Sicily, Greece, Israel, Egypt); Red Sea; Indian Ocean.

SPECIMENS STUDIED.—EGM 5: 1134; 11: 1162–1166; 12: 1145, 1158–1160; 16: 1161(US), 1167(NHA), 1168(INSTOP).

REMARKS.—Common; found from March to May and in September epiphytic on *Cymodocea nodosa*.

**Order CLADOPHORALES**

**Family CLADOPHORACEAE**

***Chaetomorpha aerea* (Dillwyn) Kuetzing**

*Conferva aerea* Dillwyn, 1807:80.

*Chaetomorpha aerea* (Dillwyn) Kuetzing, 1849:379.—Boergesen, 1925:43.—Pottier, 1929:344.—Hamel, 1931c:28.—Feldmann, 1931b:203; 1937:264; 1961:504.—Navarro and Uriarte, 1945:206.—Nasr and Aleem, 1949:277.—Funk, 1955:9.—Rayss, 1955:15.—Riedl, 1963:39.—Seoane-Camba, 1965:59.—Ardre, 1970:206.—Ben Alaya, 1970:207.—Güven and Östig, 1971:122.—Boudouresque and Perret, 1977:135.

DISTRIBUTION.—Tunisia (Tabarka, La Marsa, El Bibane); northeastern Atlantic (Portugal,

Spain, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Adriatic Sea, Turkey, Israel, Egypt); Red Sea; Indian Ocean.

SPECIMENS STUDIED.—EGM 1: 715; 4: 714(US); 29: 716(NHA), 2259(INSTOP).

REMARKS.—Occasional; found in April and May on rocks.

**\**Cladophora albida* (Hudson) Kuetzing**

*Conferva albida* Hudson, 1762:505.

*Cladophora albida* (Hudson) Kuetzing, 1843:267.—Feldmann, 1937:264.—Navarro and Uriarte, 1945:204.—Funk, 1955: 13.—Ardre, 1970:356.—Gerloff and Geissler, 1971:731.—Harotinidis and Tsekos, 1975:209.—Boudouresque and Perret, 1977:137.

DISTRIBUTION.—Tunisia (Gammarth); north-eastern Atlantic (Portugal); Mediterranean (Spain, France, Corsica, Italy, Greece, Libya); Red Sea.

SPECIMENS STUDIED.—EGM 11: 717–719(US), 720(NHA), 721(INSTOP).

REMARKS.—Rare; found in May epiphytic on *Cymodocea nodosa*.

**\**Cladophora crystallina* (Roth) Kuetzing**

*Conferva crystallina* Roth, 1797:196.

*Cladophora crystallina* (Roth) Kuetzing, 1843:213.—Boergesen, 1925:67.—Feldmann, 1937:264.—Navarro and Uriarte, 1945:204.—Rayss, 1955:19.—Güven and Östig, 1971: 121.—Boudouresque and Perret, 1977:137.

DISTRIBUTION.—Tunisia (Cap Serrat, Becha-teur, La Marsa, Sidi Bou Said, Djerba Island, El Bibane); northeastern Atlantic (Canary Islands); Mediterranean (Spain, France, Corsica, Turkey, Israel); Red Sea.

SPECIMENS STUDIED.—EGM 3: 725, 728, 729, 732–733; 12: 723, 724, 727, 731, 735, 736; 24: 730, 734, 739; 29: 726(US), 737–738(NHA), 810(INSTOP).

REMARKS.—Abundant; found from March to June and in August and October entangled with other algae or epiphytic on *Cymodocea nodosa*.

***Cladophora dalmatica* Kuetzing**

*Cladophora dalmatica* Kuetzing, 1843:268.—Hamel, 1931c: 49.—Feldmann, 1937:264.—Gerloff and Geissler, 1971:

731.—Harotinidis and Tsekos, 1975:209.—Boudouresque and Perret, 1977:138.

DISTRIBUTION.—Tunisia (Tabarka); Mediterranean (France, Corsica, Greece, Algeria); Red Sea; Indian Ocean.

SPECIMENS STUDIED.—EGM 1: 740(US), 741(NHA), 742(INSTOP).

REMARKS.—Rare; found in April epiphytic on various algae.

**\**Cladophora lutescens* Kuetzing**

*Cladophora lutescens* Kuetzing, 1854:21.—Bornet, 1892:208.

DISTRIBUTION.—Tunisia (Sidi Bou Said); Mediterranean (France).

SPECIMEN STUDIED.—EGM 13: 743(US).

REMARKS.—Rare; found in June epiphytic on *Cymodocea nodosa*.

***Cladophora prolifera* (Roth) Kuetzing**

*Conferva prolifera* Roth, 1797:182.

*Cladophora prolifera* (Roth) Kuetzing, 1845:207.—Bornet, 1892:207.—Boergesen, 1925:61.—Fremy, 1925:28.—Funk, 1927:316.—Feldmann, 1931b:203; 1937:264; 1961: 504.—Navarro and Uriarte, 1945:202.—Rayss, 1955: 17.—Dao, 1957:166.—Gayral, 1958:168.—Riedl, 1963: 39.—Seoane-Camba, 1965:59.—Ardre, 1970:357.—Ben Alaya, 1970:206.—Gerloff and Geissler, 1971:733.—Güven and Östig, 1971:121.—Giaccone et al., 1973, table iv.—Furnari and Scammacca, 1973:6.—Harotinidis and Tsekos, 1975:209.—Boudouresque and Perret, 1977:141.

DISTRIBUTION.—Tunisia (Cap Serrat, Tabarka, Ras Sidi Ali El Mekki, Raouad, Gammarth, La Marsa, Nabeul, Hammamet, Monastir); north-eastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily, Adriatic Sea, Greece, Turkey, Israel, Algeria); Red Sea; Indian Ocean.

SPECIMENS STUDIED.—EGM 1: 745, 764; 2: 744, 746, 747; 7: 759; 10: 762, 763; 11: 772, 779, 780; 12: 748–752, 757, 758, 765, 770, 771; 13: 766–769, 773–778; 15: 756(US), 761(NHA); 18: 753(INSTOP).

REMARKS.—Abundant; found from March to



May, from July to October, and in December epiphytic on various algae and *Cymodocea nodosa*.

**\**Cladophora ramosissima* (Draparnaud ex Kuetzing) Kuetzing**

*Conferva ramosissima* Draparnaud ex Kuetzing, 1845:209.

*Cladophora ramosissima* (Draparnaud ex Kuetzing) Kuetzing, 1849:396.—Feldmann, 1931b:203; 1937:264.—Nasr, 1940b:5.—Rayss, 1955:18.—Gayral, 1958:166.

DISTRIBUTION.—Tunisia (Raouad, Gammarth, Sidi Bou Said); northeastern Atlantic (Morocco); Mediterranean (France, Algeria, Egypt); Red Sea.

SPECIMENS STUDIED.—EGM 10: 781; 11: 783(US); 13: 782(NHA), 784(INSTOP).

REMARKS.—Occasional; found in March, May, and October epiphytic on various algae.

***Cladophora rupestris* (Linnaeus) Kuetzing**

*Conferva rupestris* Linnaeus, 1753:721.

*Cladophora rupestris* (Linnaeus) Kuetzing, 1843:270.—Ardre, 1970:355.—Ben Alaya, 1970:206.—Gerloff and Geissler, 1971:734.—Giaccone et al., 1973, table iv.—Harotinidis and Tsekos, 1975:209.—Boudouresque and Perret, 1977:142.

DISTRIBUTION.—Tunisia (Ras Sidi Ali El Mekki, Gammarth, La Marsa); northeastern Atlantic (Portugal); Mediterranean (Corsica, Sicily, Greece, Algeria).

SPECIMENS STUDIED.—EGM 2: 722, 11: 787(US); 12: 760(NHA), 785(INSTOP).

REMARKS.—Occasional; found in February, May, and September epiphytic on various algae.

***Cladophora utriculosa* Kuetzing**

*Cladophora utriculosa* Kuetzing, 1843:269.—Bornet, 1892:208.—Boergesen, 1925:65.—Schiffner, 1926:311.—Funk, 1927:316.—Feldmann, 1931b:204; 1937:264.—Nasr, 1940b:4.—Navarro and Uriarte, 1945:203.—Rayss, 1955:18.—Seoane-Camba, 1965:60.—Ben Alaya, 1970:206.—Gerloff and Geissler, 1971:732.—Güven and Östig, 1971:121.

DISTRIBUTION.—Tunisia (Cap Serrat, Tabarka, Sidi Bou Said, Gammarth, La Marsa, Nabeul,

Hammamet, Monastir, Sousse, Kerkenna Island, Djerba Island, El Bibane); northeastern Atlantic (Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Italy, Greece, Turkey, Israel, Algeria, Egypt); Indian Ocean.

SPECIMENS STUDIED.—EGM 1: 793–795; 2: 805; 11: 823, 830–833; 12: 807–809, 814–822, 839, 840; 13: 826–829; 15: 834–838; 16: 811–813, 824, 825; 17: 796; 18: 797–799; 19: 800, 801; 24: 806(US); 29: 802–803(NHA), 804(INSTOP).

REMARKS.—Abundant; found from January to August and from October to December epiphytic on various algae.

**Family ANADYOMENACEAE**

***Anadyomene stellata* (Wulfen) C. Agardh**

*Ulva stellata* Wulfen in Jacquin, 1786:351.

*Anadyomene stellata* (Wulfen) C. Agardh, 1822:400.—Muschler, 1910:295.—DeToni and Forti, 1913:17; 1914:293.—Boergesen, 1925:25.—Funk, 1927:320.—Hamel, 1931c:18.—Nasr, 1940a:2.—Navarro and Uriarte, 1945:202.—Nasr and Aleem, 1949:256.—Rayss, 1955:13.—Dao, 1957:167.—Edelstein, 1962:213; 1964:180.—Riedl, 1963:39.—Gerloff and Geissler, 1971:737.—Güven and Östig, 1971:122.—Giaccone et al., 1973; table iv.—Harotinidis and Tsekos, 1975:209.—Boudouresque and Perret, 1977:135.

DISTRIBUTION.—Tunisia (Korbous, Kerkenna Island, Djerba Island, Zarzis, El Bibane); northeastern Atlantic (Canary Islands); Mediterranean (Spain, Corsica, Italy, Sicily, Adriatic Sea, Greece, Turkey, Israel, Libya, Egypt); Indian Ocean.

SPECIMENS STUDIED.—EGM 14: 587, 588; 19: 568–574; 20: 590–594; 21: 581–584, 586; 24: 589; 25: 585, 595; 26: 575; 28: 596, 29: 576–577(US), 578–579(NHA), 580(INSTOP).

REMARKS.—Common; found in March, April, July, and October on rocks.

**Order SIPHONOCLEDALES**

**Family VALONIACEAE**

**\**Valonia macrophysa* Kuetzing**

*Valonia macrophysa* Kuetzing, 1843:307.—Boergesen, 1925:22.—Funk, 1927:320.—Feldmann, 1937:264.—Aleem,

1951:251.—Dao, 1957:166.—Furnari and Scammacca, 1970:217.—Gerloff and Geissler, 1971:738.—Giaccone et al., 1973, table iv.—Harotinidis and Tsekos, 1975:210.—Boudouresque and Perret, 1977:144.

**DISTRIBUTION.**—Tunisia (Raouad, Korbous, El Bibane); northeastern Atlantic (Canary Islands); Mediterranean (France, Corsica, Italy, Sicily, Greece, Egypt); Red Sea; Indian Ocean.

**SPECIMENS STUDIED.**—EGM 10: 1175, 1176; 14: 1174; 29: 1169–1171(US), 1172(NHA), 1173(INSTOP).

**REMARKS.**—Occasional; found in March, April, and October in rock crevices in the sublittoral zone.

### *Valonia utricularis* C. Agardh

*Valonia utricularis* C. Agardh, 1822:431.—Piccone, 1884:112; 1879:22.—Boergesen, 1925:22.—Funk, 1927:321.—Feldmann, 1931b:203; 1937:264; 1961:504.—Hamel, 1931c:14.—Nasr, 1940b:6.—Navarro and Uriarte, 1945:201.—Nasr and Aleem, 1949:278.—Rayss, 1955:12.—Dao, 1957:167.—Gayral, 1958:170.—Riedl, 1963:39.—Edelstein, 1964:180.—Seoane-Camba, 1965:58.—Ardre, 1970:349.—Gerloff and Geissler, 1971:738.—Güven and Östig, 1971:122.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:143.

**DISTRIBUTION.**—Tunisia (Ile Plane, La Marsa, Nabeul, Sidi Bou Said, Kerkenna Island, El Bibane); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily, Adriatic Sea, Greece, Turkey, Israel, Algeria, Libya, Egypt); Red Sea; Indian Ocean.

**SPECIMENS STUDIED.**—EGM 18: 1186; 12: 1183, 1185; 13: 1187; 15: 1184; 19: 1181–1182(US); 20: 1177–1178(NHA), 1179–1180(INSTOP).

**REMARKS.**—Common; found in April, July, September, and December on rocks.

### Family SIPHONOCALACEAE

#### *Cladophoropsis modonensis* (Kuetzing) Boergesen

*Cladophora modonensis* Kuetzing, 1849:486.

*Cladophoropsis modonensis* (Kuetzing) Boergesen, 1905:288.—

Hamel, 1931c:15.—Rayss, 1955:14.—Dao, 1957:167.—Gerloff and Geissler, 1971:737.—Giaccone et al., 1973, table iii.—Boudouresque and Perret, 1977:142.

**DISTRIBUTION.**—Tunisia (Kerkenna Island, Djerba Island, Zarzis, El Bibane); northeastern Atlantic (Canary Islands); Mediterranean (Corsica, Sicily, Greece, Israel).

**SPECIMENS STUDIED.**—EGM 20: 841–843, 853, 854; 24: 846, 849, 851; 28: 844, 845; 29: 847–848(US), 850(NHA), 852(INSTOP).

**REMARKS.**—Common; found from April to July and in October on rocks in the sublittoral zone.

### Order BRYOPSIDALES

#### Family BRYOPSIDACEAE

#### \**Derbesia lamourouxii* (J. Agardh) Solier

*Bryopsis balbisiana* var. *lamourouxii* J. Agardh, 1842:18.

*Derbesia lamourouxii* (J. Agardh) Solier, 1847:162.—Bornet, 1892:212.—Funk, 1927:333.—Feldmann, 1937:265.—Rayss, 1955:41.—Gayral, 1958:172.—Riedl, 1963:41.—Ardre, 1970:359.—Gerloff and Geissler, 1971:742.—Güven and Östig, 1971:122.—Giaccone et al., 1973, table iv.—Furnari and Scammacca, 1973:6.

**DISTRIBUTION.**—Tunisia (Gammarth); northeastern Atlantic (Portugal, Spain, Morocco); Mediterranean (France, Italy, Sicily, Adriatic Sea, Greece, Turkey, Israel); Red Sea.

**SPECIMEN STUDIED.**—EGM 11: 913(US).

**REMARKS.**—Rare; found in April on rocks in the sublittoral zone.

#### *Bryopsis balbisiana* Lamouroux

*Bryopsis balbisiana* Lamouroux, 1813:66.—Piccone, 1879:22; 1884:112.—Bornet, 1892:213.—Boergesen, 1925:98.—Feldmann, 1937:265; 1961:504.—Rayss, 1955:26.—Gayral, 1958:177.—Riedl, 1963:41.—Seoane-Camba, 1965:62.—Güven and Östig, 1971:122.—Furnari and Scammacca, 1973:6.—Boudouresque and Perret, 1977:146.

**DISTRIBUTION.**—Tunisia (La Marsa, Sidi Bou Said, Hammamet, Sousse); northeastern Atlantic

(Portugal, Spain, Morocco, Canary Islands); Mediterranean (France, Corsica, Adriatic Sea, Turkey, Israel, Algeria, Sicily).

SPECIMENS STUDIED.—EGM 12: 607, 608; 13: 610; 16: 604, 606(US); 17: 605(NHA), 609 (INSTOP).

REMARKS.—Common; found in April, July, and September on rocks in the sublittoral zone.

### **\**Bryopsis hypnoides* Lamouroux**

*Bryopsis hypnoides* Lamouroux, 1809c:135.—Feldmann, 1937: 265.—Ardre, 1970:363.—Gerloff and Geissler, 1971: 740.—Güven and Östig, 1971:122.—Giaccone et al., 1973, table iv.—Harotinidis and Tsekos, 1975:209.

DISTRIBUTION.—Tunisia (Kerkenna Island); northeastern Atlantic (Portugal, Morocco); Mediterranean (France, Sicily, Greece, Turkey); Red Sea; Indian Ocean.

SPECIMENS STUDIED.—EGM 20: 612(US), 2102(NHA).

REMARKS.—Rare; found in April on rocks in the sublittoral zone.

### ***Bryopsis muscosa* Lamouroux**

*Bryopsis muscosa* Lamouroux, 1809c:23.—Funk, 1927:328.—Feldmann, 1937:265.—Navarro and Uriarte, 1945:207.—Rayss, 1955:26.—Furnari and Scammacca, 1970:218.—Ben Alaya, 1970:206.—Gerloff and Geissler, 1971:740.—Giaccone et al., 1973, table iii.—Harotinidis and Tsekos, 1975:209.

DISTRIBUTION.—Tunisia (Sousse); northeastern Atlantic (Morocco); Mediterranean (Spain, France, Corsica, Italy, Sicily, Greece, Israel).

SPECIMENS STUDIED.—EGM 17: 613–614(US), 615(NHA), 616(INSTOP).

REMARKS.—Rare; found in April on rocks in the sublittoral zone.

### ***Bryopsis plumosa* (Hudson) C. Agardh**

*Ulva plumosa* Hudson, 1778:571.

*Bryopsis plumosa* (Hudson) C. Agardh, 1822:488.—Bornet, 1892:213.—Boergesen, 1925:97.—Hamel, 1931b:287.—Feldmann, 1937:265.—Navarro and Uriarte, 1945:207.—Aleem, 1951:251.—Rayss, 1955:26.—Gayral, 1958:180.—

Riedl, 1963:41.—Ardre, 1970:362.—Ben Alaya, 1970: 206.—Furnari and Scammacca, 1970:218.—Gerloff and Geissler, 1971:740.—Güven and Östig, 1971:122.—Harotinidis and Tsekos, 1975:209.—Boudouresque and Perret, 1977:147.

DISTRIBUTION.—Tunisia (Sidi Bou Said); northeastern Atlantic (Portugal, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Adriatic Sea, Greece, Turkey, Israel, Egypt); Red Sea; Indian Ocean.

SPECIMENS STUDIED.—EGM 12: 1608; 13: 617–621(US); 28: 2235(NHA), 2236(INSTOP).

REMARKS.—Occasional; found in February and September on rocks in the sublittoral zone.

### **\**Pseudobryopsis myura* (J. Agardh) Berthold in Oltmanns**

*Bryopsis myura* J. Agardh, 1842:20.

*Pseudobryopsis myura* (J. Agardh) Berthold in Oltmanns, 1904: 303.—Boergesen, 1925:103.—Funk, 1927:332.—Hamel, 1931b:396.—Feldmann, 1937:265.—Rayss, 1955:27.

DISTRIBUTION.—Tunisia (Djerba Island, El Bibane); northeastern Atlantic (Canary Islands); Mediterranean (France, Italy, Israel).

SPECIMENS STUDIED.—EGM 24: 1051,1052; 29: 1053(US), 1054(NHA), 1055 (INSTOP).

REMARKS.—Occasional; found in April and May on rocks in the sublittoral zone.

## **Family CAULERPACEAE**

### ***Caulerpa prolifera* (Forsskal) Lamouroux**

*Fucus prolifera* Forsskal, 1775:193.

*Caulerpa prolifera* (Forsskal) Lamouroux, 1809b:142.—Muschler, 1910:296.—DeToni and Forti, 1913:18; 1914:293.—Boergesen, 1925:112.—Fremy, 1925:28.—Schiffner, 1926: 311.—Funk, 1927:335.—Pottier, 1929:325.—Hamel, 1931b:420.—Nasr, 1940b:9.—Navarro and Uriarte, 1945: 208.—Nasr and Aleem, 1949:271.—Aleem, 1951:251.—Feldmann, 1951:106.—Rayss, 1955:22.—Dao, 1957: 168.—Edelstein, 1964:182.—Seoane-Camba, 1965:66.—Furnari and Scammacca, 1970:218.—Ardre, 1970:374.—Gerloff and Geissler, 1971:739.—Güven and Östig, 1971: 122.—Harotinidis and Tsekos, 1975:209.—Boudouresque and Perret, 1977:150.

DISTRIBUTION.—Tunisia (Mouth of Madjerda,



Gammarth, La Marsa, Sidi Bou Said, Korbous, Nabeul, Hammamet, Gabes, Kerkenna Island, Zarzis, El Bibane); northeastern Atlantic (Portugal, Spain, Canary Islands); Mediterranean (Spain, Italy, France, Greece, Turkey, Israel, Libya, Egypt); Red Sea.

SPECIMENS STUDIED.—EGM 9: 622, 651; 11: 697–700, 713; 12: 643–647, 712; 13: 623, 642; 14: 675–679; 15: 657–659; 16: 661, 662; 19: 689; 20: 663–667, 686–688, 693, 694, 696, 701; 21: 652–656; 22: 668–674; 23: 706; 24: 648–650, 680–684, 702, 703, 708–710; 25: 660; 26: 690–692, 704–705; 28: 707, 711(US); 29: 695(NHA), 696(INSTOP).

REMARKS.—Abundant; found from March to October on rocks, sometimes epiphytic on rhizomes of *Posidonia oceanica*.

### Family CODIACEAE

#### *Codium bursa* (Linnaeus) C. Agardh

*Alcyonium bursa* Linnaeus, 1759:1295.

*Codium bursa* (Linnaeus) C. Agardh, 1822:457.—Piccone, 1879:23; 1884:114.—Bornet, 1892:215.—DeToni and Forti, 1913:19.—Petersen, 1918:6.—Fremy, 1925:18.—Funk, 1927:324.—Feldmann, 1931b:207; 1937:265.—Hamel, 1931b:413.—Navarro and Uriarte, 1945:210.—Aleem, 1951:251.—Riedl, 1963:43.—Seoane-Camba, 1965:64.—Furnari and Scammacca, 1970:218.—Ben Alaya, 1970:207.—Gerloff and Geissler, 1971:741.—Güven and Östig, 1971:122.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:148.

DISTRIBUTION.—Tunisia (Bizerte, Gabes); northeastern Atlantic (Morocco, Spain); Mediterranean (Spain, France, Corsica, Italy, Sicily, Adriatic Sea, Greece, Turkey, Algeria, Libya, Egypt).

SPECIMENS STUDIED.—EGM 4: 855–858(US), 859(NHA); 22: 860(INSTOP).

REMARKS.—Occasional; found from May to June as drift material.

#### \**Codium decorticatum* (Woodward) Howe

*Ulva decorticata* Woodward, 1797:55.

*Codium decorticatum* (Woodward) Howe, 1911:494.—Ardre,

1970:370.—Giaccone et al., 1973, table iv.

DISTRIBUTION.—Tunisia (Hammamet, Sousse); northeastern Atlantic (Portugal); Mediterranean (Sicily).

SPECIMENS STUDIED.—EGM 16: 967–971(US); 17: 861–864(NHA), 965–966 (INSTOP).

REMARKS.—Occasional; found in March and April on rocks in the sublittoral zone.

### Family UDOTACEAE

#### *Espera mediterranea* Decaisne

*Espera mediterranea* Decaisne, 1842:99.—Gerloff and Geissler, 1971:739.

*Penicillus mediterraneus* (Decaisne) Thuret in Bornet, 1892:217.—Hamel, 1931b:403.

DISTRIBUTION.—Tunisia (Korbous, El Bibane); Mediterranean (Greece).

SPECIMENS STUDIED.—EGM 14: 1046–1050; 29 1042–1043(US), 1044(NHA), 1045(INSTOP).

REMARKS.—Occasional; found in April and October on rocks in sandy bottom of the sublittoral zone.

#### *Halimeda tuna* (Ellis and Solander) Lamouroux

*Corallina tuna* Ellis and Solander, 1786:111.

*Halimeda tuna* (Ellis and Solander) Lamouroux, 1812:186.—Muschler, 1910:296.—DeToni and Forti, 1913:19; 1914:293.—Funk, 1927:327.—Pottier, 1929:325.—Feldmann, 1937:265.—Nasr, 1940b:8.—Navarro and Uriarte, 1945:209.—Nasr and Aleem, 1949:277.—Aleem, 1951:251.—Rayss, 1955:29.—Dao, 1957:168.—Edelstein, 1962:213; 1964:184.—Riedl, 1963:43.—Gerloff and Geissler, 1971:741.—Giaccone et al., 1973, table iv.—Harotinidis and Tsekos, 1975:210.—Boudouresque and Perret, 1977:150.

DISTRIBUTION.—Tunisia (Cap Serrat, Cap Zebib, Tabarka, Ras Sidi Ali El Mekki, Raouad, Gammarth, La Marsa, Sidi Bou Said, Nabeul, Hammamet, Monastir, Gabes, Kerkenna Island, Djerba Island, El Bibane, Zarzis); Mediterranean (Spain, France, Corsica, Italy, Sicily, Adriatic Sea, Greece, Turkey, Israel, Libya, Egypt); Red Sea; Indian Ocean.

**SPECIMENS STUDIED.**—EGM 1: 983, 984, 1026; 2: 956–960, 975, 985–988, 1263; 5: 998; 7: 1028; 10: 1027; 11: 1013–1016; 12: 992–997, 1001; 13: 1029–1032; 15: 1007, 1024, 1025; 16: 1006, 1023; 18: 980–982; 20: 1008–1012; 21: 1033–1037; 22: 1017–1022; 24: 965–967, 972, 976–979; 25: 999, 1038–1041; 26: 971, 973; 27: 970, 974; 28: 964, 968, 969, 989, 1002–1005; 29: 961–963(US), 990–991(NHA), 1000(INSTOP).

**REMARKS.**—Abundant; found in March and October on sandy substrate in the sublittoral zone.

### *Udotea petiolata* (Turra) Boergesen

*Ulva petiolata* Turra, 1780:68.

*Udotea petiolata* (Turra) Boergesen, 1925:86.—DeToni and Forti, 1914:293.—Funk, 1955:25.—Hamel, 1931b:404.—Feldmann, 1937:265; 1961:504.—Nasr, 1940a:3.—Navarro and Uriarte, 1945:208.—Aleem, 1951:251.—Rayss, 1955:28.—Dao, 1957:168.—Edelstein, 1964:183.—Riedl, 1963:41.—Ben Alaya, 1970:207.—Furnari and Scammacca, 1970:217.—Gerloff and Geissler, 1971:739.—Güven and Östig, 1971:122.—Giaccone et al., 1973:110.—Harotinidis and Tsekos, 1975:210.—Boudouresque and Perret, 1977:153.

**DISTRIBUTION.**—Tunisia (Cap Serrat, Cap Zebib, Tabarka, Bechateur, Raf Raf, Ras Sidi Ali El Mekki, Ile Plane, Mouth of Madjerda, Raouad, La Marsa, Sidi Bou Said, Korbous, Nabeul, Hammamet, Monastir, Gabes, Kerkenna Island, Djerba Island); northeastern Atlantic (Spain, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily, Adriatic Sea, Greece, Turkey, Israel, Libya, Egypt).

**SPECIMENS STUDIED.**—EGM 1: 1063–1066, 1082; 2: 1059, 1067–1074; 3: 1088; 5: 1076, 1078; 6: 1079, 112; 7: 1116; 8: 1099–1107; 9: 1108–1110; 10: 1113–1115; 11: 1091; 12: 1075, 1077, 1080, 1081; 13: 1083, 1084, 1120–1122; 14: 1094–1098; 15: 1089, 1111; 16: 1092, 1093; 18: 1056–1058; 21: 1085–1087, 1123; 22: 1090; 24: 1060, 1061(US); 25: 1117–1119(NHA); 27: 1062(INSTOP).

**REMARKS.**—Abundant; found from February to May and in July, September, October, and December on rocks in the sublittoral zone.

## Order DASYCLADALES

### Family DASYCLADACEAE

#### *Acetabularia acetabulum* (Linnaeus) Silva

*Madrepora acetabulum* Linnaeus, 1758:793.

*Acetabularia acetabulum* (Linnaeus) Silva, 1952:255.—Gerloff and Geissler, 1971:742.—Boudouresque and Perret, 1977:133.

*Acetabularia mediterranea* Lamouroux, 1816:249.—Boergesen, 1925:77.—Fremy, 1925:28.—Schiffner, 1926:311.—Funk, 1927:322.—Feldmann, 1931b:205; 1937:264.—Hamel, 1931c:38.—Navarro and Uriarte, 1945:206.—Rayss, 1955:21.—Dao, 1957:168.—Riedl, 1963:41.—Furnari and Scammacca, 1970:218.—Ben Alaya, 1970:208.—Güven and Östig, 1971:122.—Giaccone et al., 1973, table iv.—Harotinidis and Tsekos, 1975:209.

**DISTRIBUTION.**—Tunisia (Tabarka, Bechateur, Kerkenna Island, Djerba Island, El Bibane); northeastern Atlantic (Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily, Adriatic Sea, Greece, Turkey, Israel, Algeria); Red Sea.

**SPECIMENS STUDIED.**—EGM 3: 563; 19: 552–554, 557, 558; 20: 555, 556, 559–560, 565; 21: 564; 23: 562; 24: 566(US); 29: 561(NHA), 567(INSTOP).

**REMARKS.**—Abundant; found in March, April, June, and July on rocks, occasionally epiphytic on various algae and *Cymodocea nodosa*.

#### *Dasycladus clavaeformis* (Roth) C. Agardh

*Conferia clavaeformis* Roth, 1806:315.

*Dasycladus clavaeformis* (Roth) C. Agardh, 1828:16.—DeToni, 1895:455.—Boergesen, 1925:75.—Schiffner, 1926:311.—Funk, 1927:322.—Hamel, 1931c:36.—Navarro and Uriarte, 1945:206.—Rayss, 1955:20.—Riedl, 1963:39.—Edelstein, 1964:181.—Ben Alaya, 1970:207.—Güven and Östig, 1971:122.

*Dasycladus vermicularis* (Scopoli) Krasser in Beck and Zahlbruckner, 1898:459.—Aleem, 1951:251.—Dao, 1957:168.—Gerloff and Geissler, 1971:741.—Giaccone et al., 1973:112.—Harotinidis and Tsekos, 1975:210.—Boudouresque and Perret, 1977:134.

**DISTRIBUTION.**—Tunisia (Cap Serrat, Tabarka, Raf Raf, Ras Sidi Ali El Mekki, Gammarth, Sidi Bou Said, Nabeul, Kerkenna Island, Djerba Is-

land, Zarzis, El Bibane); northeastern Atlantic (Canary Islands); Mediterranean (Spain, Corsica, Italy, Sicily, Adriatic Sea, Greece, Turkey, Libya, Egypt).

SPECIMENS STUDIED.—EGM 1: 876, 878; 2: 872–874, 880, 887, 6: 906, 907; 7: 908; 11: 910, 911; 13: 891, 912; 14: 900–904; 15: 905, 909; 18: 879; 19: 875; 23: 889; 24: 881, 886, 890; 25: 895–899; 26: 888; 28: 885(US), 892–894(NHA); 29: 882–884(INSTOP).

REMARKS.—Abundant; found from March to July and from September to October on rocks in the sublittoral zone.

## Division RHODOPHYTA

### Class RHODOPHYCEAE

#### Order BANGIALES

#### Family ERYTHROPELTIDACEAE

#### *Erythrotrichia carnea* (Dillwyn) J. Agardh

*Conferva carnea* Dillwyn, 1807, pl. 84.

*Erythrotrichia carnea* (Dillwyn) J. Agardh, 1883:15.—Boergesen, 1927:5.—Feldmann, 1937:269.—Nasr, 1940b:17.—Aleem, 1951:251.—Papenfuss, 1968:68.—Ardre, 1970:46.—Gerloff and Geissler, 1971:759.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:12.

DISTRIBUTION.—Tunisia (Tabarka, La Marsa, Sousse); northeastern Atlantic (Portugal, Canary Islands); Mediterranean (France, Sicily, Greece, Italy, Egypt, Corsica); Red Sea.

SPECIMENS STUDIED.—EGM 12: 1628–1629 (US).

REMARKS.—Occasional; found in April epiphytic on *Cymodocea nodosa*.

#### Family BANGIACEAE

#### *Bangia fuscopurpurea* (Dillwyn) Lyngbye

*Conferva fuscopurpurea* Dillwyn, 1807:54.

*Bangia fuscopurpurea* (Dillwyn) Lyngbye, 1819:83.—Funk, 1927:373.—Feldmann, 1937:269.—Gayral, 1958:280.—

Riedl, 1963:64.—Ardre, 1970:49.—Harotinidis and Tsekos, 1975:214.—Boudouresque and Perret, 1977:11.

DISTRIBUTION.—Tunisia (Bizerte, Raouad, Hammamet); northeastern Atlantic (Portugal); Mediterranean (France, Italy, Adriatic Sea, Greece, Algeria); Indian Ocean.

SPECIMENS STUDIED.—EGM 4: 1349; 10: 1518–1522, 1526(US); 16: 1937–1939(NHA), 1940–1941(INSTOP).

REMARKS.—Common; found in March and May as tufted mats on rocks in the upper littoral zone.

#### *Porphyra leucosticta* Thuret in Le Jolis

*Porphyra leucosticta* Thuret in Le Jolis, 1863:100.—Bornet, 1892:262.—Boergesen, 1927:5.—Funk, 1927:374.—Feldmann, 1937:269.—Nasr, 1940a:5.—Navarro and Uriarte, 1945:232.—Riedl, 1963:64.—Ardre, 1970:53.—Gerloff and Geissler, 1971:760.—Güven and Östig, 1971:125.—Boudouresque and Perret, 1977:12.

DISTRIBUTION.—Tunisia (Hammamet); northeastern Atlantic (Portugal, Canary Islands); Mediterranean (Spain, France, Corsica, Adriatic Sea, Turkey, Algeria, Egypt).

SPECIMENS STUDIED.—EGM 16: 1915–1918 (US), 1919(NHA), 1920(INSTOP).

REMARKS.—Occasional; found from March to April on spray-covered rocks in the littoral fringe.

#### Order GONIOTRICHALES

#### Family GONIOTRICHACEAE

#### *Goniotrichum alsidii* (Zanardini) Howe

*Bangia alsidii* Zanardini, 1839:136.

*Goniotrichum alsidii* (Zanardini) Howe, 1914:75.—Feldmann, 1937:269; 1961:506.—Aleem, 1951:251.—Edelstein, 1964:190.—Gerloff and Geissler, 1971:759.

*Goniotrichum elegans* (Chauvin) Le Jolis, 1863:103.—Boergesen, 1927:10.—Ardre, 1970:44.

DISTRIBUTION.—Tunisia (Sousse); northeastern Atlantic (Portugal, Canary Islands); Mediterranean (France, Corsica, Italy, Greece, Israel, Libya, Egypt); Red Sea; Indian Ocean.



SPECIMEN STUDIED.—EGM 17: 1541a(US).

REMARKS.—Occasional; found in April epiphytic on various algae.

## Order ACROCHAETIALES

### Family ACROCHAETIACEAE

#### *Acrochaetium virgatulum* (Harvey in Hooker) J. Agardh

*Callithamnion virgatulum* Harvey in Hooker, 1833:349.

*Acrochaetium virgatulum* (Harvey in Hooker) J. Agardh, 1892: 48.—Hamel, 1927:45.—Feldmann, 1937:270.—Aleem, 1951:251.—Ardre, 1970:56.—Gerloff and Geissler, 1971: 760.—Boudouresque and Perrett, 1977:15.

DISTRIBUTION.—Tunisia (La Marsa); north-eastern Atlantic (Portugal, Canary Islands); Mediterranean (Corsica, France, Greece, Egypt).

SPECIMEN STUDIED.—EGM 12: 1752(US).

REMARKS.—Rare; found in April epiphytic on *Cymodocea nodosa*.

#### \**Acrochaetium codiculum* Boergesen

*Acrochaetium codiculum* Boergesen, 1927:33.

DISTRIBUTION.—Tunisia (Sousse); northeastern Atlantic (Canary Islands).

SPECIMEN STUDIED.—EGM 17: 1541b(US).

REMARKS.—Occasional; found in April epiphytic on *Cymodocea nodosa*.

#### *Acrochaetium savianum* (Meneghini) Naegeli

*Callithamnion savianum* Meneghini, 1840:[3].

*Acrochaetium savianum* (Meneghini) Naegeli, 1861:171.—Feldmann, 1937:270.—Ardre, 1970:55.

DISTRIBUTION.—Tunisia (La Marsa); north-eastern Atlantic (Portugal); Mediterranean (France, Libya).

SPECIMEN STUDIED.—EGM 12: 2133(US).

REMARKS.—Occasional; found April epiphytic on *Cymodocea nodosa*.

## Order NEMALIALES

### Family HELMINTHOCLADIACEAE

#### *Liagora distenta* (Mertens in Roth) C. Agardh

*Fucus distentus* Mertens in Roth, 1806:103.

*Liagora distenta* (Mertens in Roth) C. Agardh, 1822:394.—Fremy, 1925:28.—Boergesen, 1927:62.—Feldmann, 1931b:227; 1937:270.—Navarro and Uriarte, 1945:234.—Seoane-Camba, 1965:94.—Gerloff and Geissler, 1971: 761.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:16.

DISTRIBUTION.—Tunisia (Bechateur); north-eastern Atlantic (Spain, Canary Islands); Mediterranean (Spain, France, Corsica, Sicily, Greece, Algeria).

SPECIMENS STUDIED.—EGM 3: 1316–1321; 18: 1971(US), 1972(NHA), 2012(INSTOP).

REMARKS.—Occasional; found in April, June, and July on rocks in the sublittoral zone.

#### *Liagora viscida* (Forsskal) C. Agardh

*Fucus viscidus* Forsskal, 1775:193.

*Liagora viscida* (Forsskal) C. Agardh, 1822:395.—Muschler, 1910:303.—Funk, 1927:378.—Feldmann, 1931b:226; 1937:270; 1961:506.—Navarro and Uriarte, 1945:233.—Riedl, 1963:65.—Ardre, 1970:62.—Ben Alaya, 1970: 212.—Gerloff and Geissler, 1971:761.—Güven and Östig, 1971:127.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:16.

DISTRIBUTION.—Tunisia (Tabarka, Bechateur); northeastern Atlantic (Portugal); Mediterranean (Spain, France, Corsica, Italy, Sicily, Adriatic Sea, Greece, Turkey, Algeria, Libya).

SPECIMENS STUDIED.—EGM 1: 1211; 3: 1310–1313(US), 1314(NHA), 1315(INSTOP).

REMARKS.—Occasional; found in June and July on rocks in the sublittoral zone.

## Order CHAETANGIALES

### Family CHAETANGIACEAE

#### \**Scinaia forcellata* (Turner) Bivona

*Ulva forcellata* Turner, 1801:300.

*Scinaia forcellata* (Turner) Bivona, 1822:[3].—Bornet, 1892:

265.—Boergesen, 1927:63.—Funk, 1927:378.—Feldmann, 1937:270.—Navarro and Uriarte, 1945:234.—Aleem, 1951:251.—Gayral, 1958:296.—Seoane-Camba, 1965:94.—Ardre, 1970:63.—Furnari and Scammacca, 1970:220.—Güven and Östig, 1971:128.—Harotinidis and Tsekos, 1975:219.—Boudouresque and Perret, 1977:17.

DISTRIBUTION.—Tunisia (Sousse); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, Sicily, France, Corsica, Italy, Greece, Turkey, Egypt); Indian Ocean.

SPECIMENS STUDIED.—EGM 17: 1943–1946 (US), 1947(NHA), 1948(INSTOP).

REMARKS.—Rare; found in April on rocks in the sublittoral zone.

## Order BONNEMAISONIALES

### Family BONNEMAISONIACEAE

#### *Asparagopsis armata* Harvey

*Asparagopsis armata* Harvey, 1855:544.—Hamel, 1926:420.—Feldmann, 1931b:227; 1937:270.—Funk, 1955:68.—Gayral, 1958:284.—Seoane-Camba, 1965:96.—Papenfuss, 1968:73.—Ardre, 1970:142.—Güven and Östig, 1971:127.—Giaccone et al., 1973, table iv.

DISTRIBUTION.—Tunisia (Cap Serrat); northeastern Atlantic (Portugal, Spain, Morocco); Mediterranean (France, Italy, Sicily, Turkey, Algeria); Red Sea; Indian Ocean.

SPECIMEN STUDIED.—EGM 2: 1545(US).

REMARKS.—Rare; found in April on rocks in the sublittoral zone.

#### \**Bonnemaisonia asparagoides* (Woodward) C. Agardh

*Fucus asparagoides* Woodward, 1794:239.

*Bonnemaisonia asparagoides* (Woodward) C. Agardh, 1822:197.—Funk, 1927:411.—Feldmann, 1931b:227; 1937:270.—Navarro and Uriarte, 1945:234.—Seoane-Camba, 1965:96.—Ardre, 1970:142.

DISTRIBUTION.—Tunisia (Tabarka, Monastir); northeastern Atlantic (Portugal, Spain); Mediterranean (Spain, France, Italy).

SPECIMENS STUDIED.—EGM 18: 2016(US), 2017(NHA), 2018(INSTOP).

REMARKS.—Rare; found in April on rocks in the sublittoral zone.

#### \*“*Falkenbergia rufolanosa*” (Harvey) Schmitz in Engler and Prantl

(tetrasporophyte stage of *Asparagopsis armata*)

*Polysiphonia rufolanosa* Harvey, 1855:540.

*Falkenbergia rufolanosa* (Harvey) Schmitz in Engler and Prantl, 1897:479.—Gayral, 1958:288.—Seoane-Camba, 1965:97.—Ardre, 1970:142.—Furnari and Scammacca, 1970:224.—Güven and Östig, 1971:127.—Boudouresque and Perret, 1977:94.

DISTRIBUTION.—Tunisia (Sidi Bou Said); northeastern Atlantic (Portugal, Spain, Morocco); Mediterranean (Corsica, Turkey, Sicily).

SPECIMEN STUDIED.—EGM 13: 1757(US).

REMARKS.—Rare; found in October on rocks in the sublittoral zone.

#### “*Trailliella intricata*” Batters

(tetrasporophyte stage of *Bonnemaisonia hamifera*)

*Trailliella intricata* Batters, 1896:10.—Petersen, 1918:13.—Boergesen, 1930:9.—Feldmann, 1931a:17.

DISTRIBUTION.—Tunisia (Cap Serrat); northeastern Atlantic (Canary Islands).

SPECIMEN STUDIED.—EGM 2: 1546(US).

REMARKS.—Rare; found in April epiphytic on *Cystoseira*.

## Order GELIDIALES

### Family GELIDIACEAE

#### \**Gelidium latifolium* (Greville) Bornet and Thuret

*Gelidium corneum* var. *latifolium* Greville, 1830:143.

*Gelidium latifolium* (Greville) Bornet and Thuret, 1876:58.—Bornet, 1892:270.—Funk, 1927:70.—Feldmann, 1931b:228; 1937:270.—Navarro and Uriarte, 1945:236.—Aleem, 1951:251.—Gayral, 1958:306.—Edelstein, 1964:191.—Seoane-Camba, 1965:98.—Ardre, 1970:65.—Gerloff and

Geissler, 1971:762.—Güven and Östig, 1971:127.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:19.

**DISTRIBUTION.**—Tunisia (Cap Serrat); north-eastern Atlantic (Portugal Spain, Morocco); Mediterranean (Spain, France, Corsica, Italy, Sicily, Greece, Turkey, Israel, Algeria); Red Sea.

**SPECIMENS STUDIED.**—EGM 2: 1197–1198(US), 1199(NHA), 1200(INSTOP).

**REMARKS.**—Rare; found in April on rocks in the sublittoral zone.

### \**Gelidium pectinatum* Montagne

*Gelidium pectinatum* Montagne, 1846:108.—Bornet, 1892:271.—Boergesen, 1927:89.—Funk, 1927:381.—Navarro and Uriarte, 1945:236.—Edelstein, 1962:213; 1964:191.—Ardre, 1970:66.—Giaccone et al., 1973, table iv.

**DISTRIBUTION.**—Tunisia (Cap Serrat, Cap Zebib, Bechateur, La Marsa); northeastern Atlantic (Portugal, Canary Islands); Mediterranean (Sicily, Spain, Italy).

**SPECIMENS STUDIED.**—EGM 2: 1194, 1195; 3: 1297; 5: 1357(US); 12: 1615(NHA), 1616(INSTOP).

**REMARKS.**—Common; found in February, April, July, and August on rocks in the sublittoral zone.

### *Gelidium pusillum* (Stackhouse) Le Jolis

*Fucus pusillus* Stackhouse, 1801:17.

*Gelidium pusillum* (Stackhouse) Le Jolis, 1863:139.—Bornet, 1892:268.—Boergesen, 1927:83.—Feldmann, 1931b:228; 1937:270.—Navarro and Uriarte, 1945:235.—Nasr and Aleem, 1949:278.—Gayral, 1958:308.—Seoane-Camba, 1965:100.—Ardre, 1970:72.—Gerloff and Geissler, 1971:762.—Boudouresque and Perret, 1977:19.

**DISTRIBUTION.**—Tunisia (Gammarth, Hammamet); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Adriatic Sea, Greece, Sicily, Turkey, Algeria, Libya, Egypt); Red Sea; Indian Ocean.

**SPECIMENS STUDIED.**—EGM 7: 1384; 11: 1528–1530, 1536; 12: 1623–1627; 13: 1756; 14: 1826–

1830; 15: 1869; 1870; 16: 1908–1914(US); 17: 1949–1950(NHA), 2298(INSTOP).

**REMARKS.**—Common; found from March to May and in September, October, and December on rocks in the sublittoral zone.

### *Pterocladia capillacea* (Gmelin) Bornet and Thuret

*Fucus capillaceus* Gmelin, 1768:146.

*Pterocladia capillacea* (Gmelin) Bornet and Thuret, 1876:57.—Bornet, 1892:272.—Boergesen, 1927:93.—Funk, 1955:71.—Feldmann, 1931b:229; 1937:271; 1961:506.—Nasr, 1940b:20.—Navarro and Uriarte, 1945:236.—Aleem, 1951:251.—Gayral, 1958:312.—Riedl, 1963:65.—Ardre, 1970:73.—Furnari and Scammacca, 1970:221.—Gerloff and Geissler, 1971:762.—Güven and Östig, 1971:127.—Lipkin and Safriel, 1971:10.

**DISTRIBUTION.**—Tunisia (Cap Zebib, Bechateur, La Marsa, Sousse); northeastern Atlantic (Portugal, Morocco, Canary Islands); Mediterranean (Spain, France, Italy, Adriatic Sea, Greece, Sicily, Turkey, Israel, Algeria, Libya, Egypt); Indian Ocean.

**SPECIMENS STUDIED.**—EGM 3: 2299; 5: 1360; 12: 1649–1651(US); 17: 1953–1955(NHA), 1956–1957(INSTOP).

**REMARKS.**—Common; found in February and April and from June to September on rocks in the sublittoral zone.

## Order CRYPTONEMIALES

### Family PEYSSONNELIACEAE

#### *Peyssonnelia rubra* (Greville) J. Agardh

*Zonaria rubra* Greville, 1826:340.

*Peyssonnelia rubra* (Greville) J. Agardh, 1851:502.—Piccone, 1879:29; 1884:129.—Bornet, 1892:347.—Muschler, 1910:311.—Petersen, 1918:12.—Boergesen, 1929:13.—Feldmann, 1931b:240; 1937:271; 1961:506.—Navarro and Uriarte, 1945:241.—Aleem, 1951:251.—Edelstein, 1962:213; 1964:193.—Gerloff and Geissler, 1971:763.—Güven and Östig, 1971:127.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:56.

**DISTRIBUTION.**—Tunisia (Cap Serrat, Cap Ze-



bib, Ile Plane, Korbous, Djerba Island); north-eastern Atlantic (Canary Islands); Mediterranean (Spain, France, Corsica, Sicily, Greece, Turkey, Israel, Algeria, Libya, Egypt); Red Sea.

SPECIMENS STUDIED.—EGM 1: 1204; 2: 1226–1234, 1248, 1249, 1268, 1269; 5: 1368; 8: 1390, 1391, 1397–1401(US); 14: 1849–1850(NHA), 1851(INSTOP).

REMARKS.—Abundant; found in January, February, April, May, July, August, October, and December growing as a fleshy crust on rocks.

### *Peyssonnelia squamaria* (Gmelin) Decaisne

*Fucus squamarius* Gmelin, 1768:171.

*Peyssonnelia squamaria* (Gmelin) Decaisne, 1839:168.—Bornet, 1892:347.—Muschler, 1910:311.—DeToni and Forti, 1913:6; 1914:290.—Feldmann, 1931b:240; 1937:271.—Navarro and Uriarte, 1945:241.—Aleem, 1951:251.—Dao, 1957:170.—Edelstein, 1962:213; 1964:193.—Riedl, 1963:67.—Ardre, 1970:76.—Ben Alaya, 1970:210.—Gerloff and Geissler, 1971:763.—Güven and Östig, 1971:127.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:57.

DISTRIBUTION.—Tunisia (Cap Serrat, Cap Zebib, Tabarka, Bechateur, Raouad, mouth of Madjerda, Gammarth, La Marsa, Sidi Bou Said, Korbous, Nabeul, Monastir, Gabes); northeastern Atlantic (Portugal); Mediterranean (Spain, France, Corsica, Italy, Sicily, Adriatic Sea, Greece, Turkey, Israel, Algeria, Libya, Egypt); Red Sea.

SPECIMENS STUDIED.—EGM 1: 1205; 2: 1222, 1223; 3: 1307; 5: 1365; 9: 1468–1476; 10: 1493–1495; 11: 1553, 1567–1570; 12: 1682–1684, 1686–1688; 13: 1785–1788; 14: 1847, 1848; 15: 1886, 1887; 18: 1978(US), 1996(NHA); 22: 2131(INSTOP).

REMARKS.—Abundant; found from February to December usually on rocks but sometimes epiphytic on some algae; some specimens dredged from 4 to 45 m.

## Family CORALLINACEAE

### \**Amphiroa beauvoisii* Lamouroux

*Amphiroa beauvoisii* Lamouroux, 1816:299.—Nasr, 1940b: 21.—Navarro and Uriarte, 1945:249.—Aleem, 1951:251.

DISTRIBUTION.—Tunisia (La Marsa); Mediterranean (Egypt).

SPECIMEN STUDIED.—EGM 12: 1173(US).

REMARKS.—Rare; found in October on rocks in the sublittoral zone.

### *Amphiroa rigida* Lamouroux

*Amphiroa rigida* Lamouroux, 1816:297.—Muschler, 1910: 312.—DeToni and Forti, 1914:290.—Funk, 1927:436.—Feldmann, 1931b:242; 1937:272; 1961:507.—Navarro and Uriarte, 1945:249.—Aleem, 1951:251.—Hamel and Lemoine, 1953:40.—Edelstein, 1962:213; 1964:195.—Riedl, 1963:70.—Seoane-Camba, 1965:118.—Ardre, 1970:92.—Gerloff and Geissler, 1971:764.—Güven and Östig, 1971:127.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:36.

DISTRIBUTION.—Tunisia (Cap Serrat, Bechateur); northeastern Atlantic (Portugal, Spain); Mediterranean (Spain, Corsica, Sicily, Adriatic Sea, Greece, Turkey, Israel, Algeria, Libya, Egypt); Indian Ocean.

SPECIMENS STUDIED.—EGM 2: 1255, 1262(US); 3: 1340(NHA), 1341(INSTOP).

REMARKS.—Occasional; found from April to June on rocks in the sublittoral zone.

### *Corallina elongata* Ellis and Solander

*Corallina elongata* Ellis and Solander, 1786:121.—Boudouresque and Perret, 1977:37.

*Corallina mediterranea* Areschoug in J. Agardh, 1852:568.—Bornet, 1892:350.—Funk, 1927:438.—Boergesen, 1929: 68.—Feldmann, 1931b:242; 1937:272, 1961:507.—Nasr, 1940b:22.—Navarro and Uriarte, 1945:247.—Nasr and Aleem, 1949:278.—Aleem, 1951:251.—Gayral, 1958: 320.—Riedl, 1963:70.—Seoane-Camba, 1965:110.—Ardre, 1970:94.—Furnari and Scammacca, 1970:221.—Gerloff and Geissler, 1971:764.—Güven and Östig, 1971: 127.—Lipkin and Safriel, 1971:10.

DISTRIBUTION.—Tunisia (Tabarka, Gammarth, Hammamet, Sousse), northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Adriatic Sea, Greece, Turkey, Israel, Algeria, Egypt, Sicily).

SPECIMENS STUDIED.—EGM 1: 1197; 13: 1754;

16: 1907, 1921–1923(US), 1924(NHA); 17: 1963(INSTOP).

REMARKS.—Common; found in January, March, April, June, July, and October on rocks in the sublittoral zone.

### *Corallina granifera* Ellis and Solander

*Corallina granifera* Ellis and Solander, 1786:120.—Funk, 1927: 438.—Boergesen, 1929:69.—Feldmann, 1931b:242; 1937: 272.—Navarro and Uriarte, 1945:248.—Seoane-Camba, 1965:110.—Ardre, 1970:96.—Gerloff and Geissler, 1971: 764.—Güven and Östig, 1971:127.—Lipkin and Safriel, 1971:9.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:39.

DISTRIBUTION.—Tunisia (Tabarka, Bechateur, Bizerte, Raouad, Gammarth, La Marsa, Sidi Bou Said, Nabeul, Aghir, El Bibane); northeastern Atlantic (Portugal); Mediterranean (Spain, France, Corsica, Italy, Sicily, Greece, Turkey, Israel, Algeria, Libya).

SPECIMENS STUDIED.—EGM 1: 1194–1196; 3: 1300–1304; 4: 1343; 10: 1479–1481, 1489; 11: 1552, 1554; 12: 1652; 13: 1753, 1771, 1772; 15: 1877–1880; 24: 2175(US), 2176–2177(NHA); 29: 2261(INSTOP).

REMARKS.—Abundant; found from March to July and in September, October, and December on rocks and epiphytic on various algae in the sublittoral zone.

### *Corallina officinalis* Linnaeus

*Corallina officinalis* Linnaeus, 1758:805.—Bornet, 1892:350.—Muschler, 1910:312.—Feldmann, 1931b:242; 1937:272.—Navarro and Uriarte, 1945:247.—Aleem, 1951:251.—Gayral, 1958:317.—Seoane-Camba, 1965:110.—Ardre, 1970:92.—Ben Alaya, 1970:211.—Gerloff and Geissler, 1971:764.—Güven and Östig, 1971:127.—Lipkin and Safriel, 1971:10.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:39.

DISTRIBUTION.—Tunisia (Bizerte, La Marsa); northeastern Atlantic (Portugal, Spain, Morocco); Mediterranean (Spain, France, Corsica, Sicily, Greece, Turkey, Israel, Algeria, Libya, Egypt); Indian Ocean.

SPECIMENS STUDIED.—EGM 4: 342; 5: 1355 (US), 1356(NHA); 12: 1607(INSTOP).

REMARKS.—Occasional; found in May and June and from August to September on rocks in the sublittoral zone.

### *Dermatolithon pustulatum* (Lamouroux) Foslíe

*Melobesia pustulata* Lamouroux, 1816:315.

*Dermatolithon pustulatum* (Lamouroux) Foslíe, 1899:11.—Muschler, 1910:312.—Feldmann, 1937:272.—Navarro and Uriarte, 1945:245.—Funk, 1955:98.—Gayral, 1958: 340.—Seoane-Camba, 1965:114.—Ardre, 1970:89.—Gerloff and Geissler, 1971:765.—Boudouresque and Perret, 1977:41.

DISTRIBUTION.—Tunisia (Zarzis, La Marsa); northeastern Atlantic (Portugal, Spain, Morocco); Mediterranean (Spain, France, Corsica, Italy, Greece, Libya); Red Sea; Indian Ocean.

SPECIMENS STUDIED.—EGM 12: 1176–1177 (US).

REMARKS.—Common; found in October as a crust on rocks and *Cymodocea nodosa*.

### *Foslíella farinosa* (Lamouroux) Howe

*Melobesia farinosa* Lamouroux, 1816:315.—DeToni and Forti, 1913:6; 1914:290.—Schiffner, 1926:304.—Funk, 1955: 97.—Boergesen, 1929:65.—Feldmann, 1931b:242; 1937: 272; 1961:507.—Nasr, 1940b:22.—Navarro and Uriarte, 1945:246.—Nasr and Aleem, 1949:277.—Edelstein, 1962: 214; 1964:195.—Seoane-Camba, 1965:116.—Ardre, 1970: 90.—Gerloff and Geissler, 1971:767.—Güven and Östig, 1971:127.—Giaccone et al., 1973, table iv.

*Foslíella farinosa* (Lamouroux) Howe, 1920:587.—Aleem, 1951:251.—Hamel and Lemoine, 1953:102.—Riedl, 1963: 69.—Boudouresque and Perret, 1977:41.

DISTRIBUTION.—Tunisia (Cap Serrat, Tabarka, La Marsa, Kerkenna Island, Djerba Island, El Bibane); northeastern Atlantic (Portugal, Spain, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily, Adriatic Sea, Greece, Turkey, Algeria, Libya); Red Sea; Indian Ocean.

SPECIMEN STUDIED.—EGM 2: 1190(US).

REMARKS.—Occasional; found from April to July and in September as a crust on *Cymodocea nodosa*.



***Haliptilon squamatum* (Linnaeus) Johansen,  
Irvine, and Webster**

*Corallina squamata* Linnaeus, 1767:540.

*Haliptilon squamatum* (Linnaeus) Johansen et al., 1973:212.—  
Boudouresque and Perret, 1977:44.

*Corallina squamata* Ellis and Solander, 1786:117.—Bornet,  
1892:351.—Gayral, 1958:320.—Ardre, 1970:96.

DISTRIBUTION.—Tunisia (Cap Serrat); north-eastern Atlantic (Portugal, Morocco); Mediterranean (Corsica, Libya, Greece).

SPECIMENS STUDIED.—EGM 2: 1139(US), 1178(NHA), 1220(INSTOP).

REMARKS.—Occasional; found in April on rocks in the sublittoral zone.

***Jania corniculata* (Linnaeus) Lamouroux**

*Corallina corniculata* Linnaeus, 1758:806.

*Jania corniculata* (Linnaeus) Lamouroux, 1812:186.—Bornet,  
1892:351.—Feldman, 1937:272.—Navarro and Uriarte,  
1945:248.—Seoane-Camba, 1965:112.—Ardre, 1970:  
98.—Ben Alaya, 1970:211.—Boudouresque and Perret,  
1977:44.

DISTRIBUTION.—Tunisia (Cap Serrat, Cap Zebib); northeastern Atlantic (Portugal, Spain, Morocco); Mediterranean (Spain, France, Corsica).

SPECIMENS STUDIED.—EGM 2: 1225; 3: 1291, 1293(US), 1294(NHA); 5: 1354(INSTOP).

REMARKS.—Common; found in February and April on rocks.

**\**Jania longifurca* Zanardini**

*Jania longifurca* Zanardini, 1843:43.—Bornet, 1892:351.—  
Feldmann, 1931b:242; 1937:272.—Gayral, 1958:330.—  
Seoane-Camba, 1965:112.—Ardre, 1970:98.—Furnari  
and Scammacca, 1973:13.—Gerloff and Geissler, 1971:  
766.

DISTRIBUTION.—Tunisia (Cap Zebib, Becheur, La Marsa); northeastern Atlantic (Portugal, Spain, Morocco); Mediterranean (France, Algeria, Sicily).

SPECIMENS STUDIED.—EGM 3: 1305, 1306; 5: 1353, 1364; 12: 1606, 1671–1680(US), 1681 (NHA), 1685(INSTOP).

REMARKS.—Common; found from January to December on rocks in the sublittoral zone.

***Jania rubens* (Linnaeus) Lamouroux**

*Corallina rubens* Linnaeus, 1767:1305.—DeToni and Forti,  
1914:290.

*Jania rubens* (Linnaeus) Lamouroux, 1812:186.—Piccone,  
1879:30; 1884:130.—Bornet, 1892:351.—Muschler, 1910:  
313.—Boergesen, 1929:70.—Feldmann, 1931b:242; 1937:  
272; 1961:507.—Navarro and Uriarte, 1945:248.—Nasr  
and Aleem, 1949:278.—Aleem, 1951:251.—Funk, 1955:  
102.—Dao, 1957:171.—Gayral, 1958:327.—Riedl, 1963:  
70.—Edelstein, 1964:195.—Seoane-Camba, 1965:113.—  
Ardre, 1970:97.—Ben Alaya, 1970:211.—Gerloff and  
Geissler, 1971:766.—Giaccone et al., 1973, table iv.—Bou-  
douresque and Perret, 1977:45.

DISTRIBUTION.—Tunisia (Tabarka, Gammarth, La Marsa, Sidi Bou Said, Nabeul, Aghir, Zarzis); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily, Adriatic Sea, Greece, Israel, Algeria, Libya, Egypt); Red Sea; Indian Ocean.

SPECIMENS STUDIED.—EGM 1: 1198–1203; 3: 1292; 11: 1565, 1566; 12: 1668–1670; 13: 1782; 15: 1868, 1885; 28: 2234(US), 2250–2251(NHA), 2253 (INSTOP).

REMARKS.—Common; found in January and from March to December on rocks, epiphytic on various algae and *Cymodocea nodosa*.

***Lithophyllum incrustans* Philippi**

*Lithophyllum incrustans* Philippi, 1837:387.—DeToni and Forti, 1914:290.—Funk, 1927:434.—Feldmann, 1931b: 240; 1937:271.—Hamel and Lemoine, 1953:48.—Gayral, 1958:335.—Riedl, 1963:69.—Seoane-Camba, 1965:113.—Ardre, 1970:85.—Gerloff and Geissler, 1971:766.—Furnari and Scammacca, 1973:13.—Boudouresque and Perret, 1977:47.

DISTRIBUTION.—Tunisia (La Marsa); north-eastern Atlantic (Portugal, Spain, Morocco); Mediterranean (France, Corsica, Italy, Sicily, Adriatic Sea, Greece, Algeria, Libya); Red Sea.

SPECIMEN STUDIED.—EGM 12: 1175(US).

REMARKS.—Occasional; found in January, March, April, October, and November as crust on rocks in the sublittoral zone.



## Family CRYPTONEMIACEAE

### \**Cryptonemia seminervis* (C. Agardh) J. Agardh

*Sphaerococcus seminervis* C. Agardh, 1822:232.

*Cryptonemia seminervis* (C. Agardh) J. Agardh, 1851:226.—Bornet, 1892:341.—Gayral, 1958:353.—Seoane-Camba, 1965:117.—Ardre, 1970:101.

DISTRIBUTION.—Tunisia (La Marsa); north-eastern Atlantic (Portugal, Spain, Morocco).

SPECIMENS STUDIED.—EGM 12: 1637–1638 (US).

REMARKS.—Occasional; found in September on rocks in the sublittoral zone.

## Family KALLYMENIACEAE

### *Kallymenia microphylla* J. Agardh

*Kallymenia microphylla* J. Agardh, 1848:288.—Bornet, 1892:278.—Funk, 1927:389.—Boergesen, 1929:75.—Feldmann, 1961:507.—Navarro and Uriarte, 1945:249.—Edelstein, 1962:215; 1964:196.—Ardre, 1970:103.—Gerloff and Geissler, 1971:769.—Güven and Östig, 1971:127.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:46.

DISTRIBUTION.—Tunisia (El Attaya, Kerkenna Island); northeastern Atlantic (Portugal, Canary Islands); Mediterranean (Spain, Corsica, Italy, Sicily, Greece, Turkey, Israel, Algeria).

SPECIMEN STUDIED.—EGM 20: 2100(US).

REMARKS.—Rare; found in April on rocks in the sublittoral zone.

## Order GIGARTINALES

## Family HYPNEACEAE

### *Hypnea musciformis* (Wulfen in Jacquin) Lamouroux

*Fucus musciformis* Wulfen in Jacquin, 1786:154.

*Hypnea musciformis* (Wulfen in Jacquin) Lamouroux, 1813:43.—Piccone, 1879:29; 1884:127.—Bornet, 1892:284.—Muschler, 1910:305.—DeToni and Forti, 1913:11.—Funk, 1955:77.—Boergesen, 1929:84.—Feldmann, 1931b:237;

1937:274; 1961:507.—Navarro and Uriarte, 1945:254.—Nasr and Aleem, 1949:278.—Gayral, 1958:385.—Riedl, 1963:73.—Seoane-Camba, 1965:124.—Ardre, 1970:111.—Ben Alaya, 1970:210.—Gerloff and Geissler, 1971:772.—Güven and Östig, 1971:125.—Lipkin and Safriel, 1971:9.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:23.

DISTRIBUTION.—Tunisia (Cap Zebib, Tabarka, Raf Raf, Raouad, Gammarrh, Sidi Bou Said, La Marsa, Nabeul, Hammamet, Monastir, Djerba Island, El Bibane, Bechateur, Ras Sidi Ali El Mekki); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily, Adriatic Sea, Greece, Turkey, Israel, Algeria, Libya, Egypt); Red Sea; Indian Ocean.

SPECIMENS STUDIED.—EGM 1: 1207–1210; 3: 1308, 1309; 5: 1369; 6: 1377; 7: 1385; 10: 1496; 11: 1535, 1571, 1574, 1575; 12: 1689–1706; 13: 1790, 1796; 15: 1888–1890; 16: 1925; 18: 1997, 1998; 20: 2067, 2068; 24: 2171–2173(US); 29: 2262(NHA), 2263(INSTOP).

REMARKS.—Abundant; found year round on rocks and epiphytic on *Cymodocea nodosa*.

## Family PLOCAMIACEAE

### *Plocamium cartilagineum* (Linnaeus) Dixon

*Fucus cartilagineus* Linnaeus, 1753:1161.

*Plocamium cartilagineum* (Linnaeus) Dixon, 1967:58.—Gerloff and Geissler, 1971:771.—Boudouresque and Perret, 1977:25.

*Plocamium coccineum* (Hudson) Lyngbye, 1819:39.—Bornet, 1892:291.—DeToni, 1895:453.—Petersen, 1918:19.—Funk, 1955:77.—Boergesen, 1929:94.—Feldmann, 1931b:238; 1937:273.—Navarro and Uriarte, 1945:254.—Gayral, 1958:385.—Riedl, 1963:71.—Seoane-Camba, 1965:120.—Ardre, 1970:112.—Ben Alaya, 1970:211.—Furnari and Scammacca, 1970:222.—Güven and Östig, 1971:128.

DISTRIBUTION.—Tunisia (Tabarka, Cap Zebib, mouth of Madjerda, Gammarrh, Sidi Bou Said, La Marsa, Monastir, Sousse); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily, Turkey, Algeria, Libya); Indian Ocean.

SPECIMENS STUDIED.—EGM 1: 1192, 1193; 5: 1358; 9: 1423–1431; 11: 1531–1533; 12: 1653–1667; 13: 1768–1770(US); 17: 1958–1962(NHA); 18: 1977(INSTOP).

REMARKS.—Abundant; found from January to July and from September to December on rocks as well as epiphytic on various algae; some specimens dredged from 15 to 57 m.

### Family SPHAEROCOCCACEAE

#### *Sphaerococcus coronopifolius* (Goodenough and Woodward) Stackhouse

*Fucus coronopifolius* Goodenough and Woodward, 1797:185.

*Sphaerococcus coronopifolius* (Goodenough and Woodward) Stackhouse, 1809:57.—Muschler, 1910:304.—DeToni and Forti, 1913:12.—Petersen, 1918:18.—Ardre, 1970:115.—Gerloff and Geissler, 1971:771.

*Sphaerococcus coronopifolius* (Goodenough and Woodward) C. Agardh, 1817:29.—Bornet, 1892:282.—Funk, 1955:77.—Boergesen, 1929:80.—Feldmann, 1931b:236; 1937:273.—Navarro and Uriarte, 1945:255.—Gayral, 1958:374.—Riedl, 1963:72.—Seoane-Camba, 1965:122.—Güven and Östig, 1971:125.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:29.

DISTRIBUTION.—Tunisia (Cap Serrat, Cap Zebib, Bizerte, Ile Plane, Raf Raf, mouth of Madjerda, Raouad, Gammarth, Sidi Bou Said, Korbous); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily, Adriatic Sea, Greece, Turkey).

SPECIMENS STUDIED.—EGM 2: 1130, 1276–1280, 1282–1289; 5: 1362; 6: 1375; 8: 1416; 9: 1450; 10: 1492; 11: 1555–1564(US); 13: 1780–1781(INSTOP); 14: 1837–1841(NHA).

REMARKS.—Abundant; found from February to May and in July, September, October, and December on rocks; some specimens dredged from 40 to 65 m.

### Family FURCELLARIACEAE

#### \**Halarachnion ligulatum* (Woodward) Kuetzing

*Ulva ligulata* Woodward, 1797:54.

*Halarachnion ligulatum* (Woodward) Kuetzing, 1843:394.—

Bornet, 1892:345.—Funk, 1927:423.—Boergesen, 1929:9.—Navarro and Uriarte, 1945:251.—Gerloff and Geissler, 1971:771.

DISTRIBUTION.—Tunisia (Sidi Bou Said); northeastern Atlantic (Morocco, Canary Islands); Mediterranean (Spain, Italy, Greece).

SPECIMEN STUDIED.—EGM 13: 1809(US).

REMARKS.—Rare; found in October on rocks in the sublittoral zone.

### Family GRACILARIACEAE

#### *Gracilaria armata* (C. Agardh) J. Agardh

*Sphaerococcus armatus* C. Agardh, 1827:645.

*Gracilaria armata* (C. Agardh) J. Agardh, 1847:15.—Bornet, 1892:283.—DeToni, 1895:453.—Schiffner, 1926:302.—Funk, 1955:79.—Boergesen, 1929:82.—Feldmann, 1931b:237; 1937:273.—Nasr and Aleem, 1949:276.—Gerloff and Geissler, 1971:770.

DISTRIBUTION.—Tunisia (La Marsa); northeastern Atlantic (Canary Islands); Mediterranean (France, Italy, Algeria, Greece, Libya, Egypt).

SPECIMENS STUDIED.—EGM 12: 1610–1613(US), 1614(NHA), 1622(INSTOP).

REMARKS.—Occasional; found in April, May, and September on rocks in the sublittoral zone.

#### *Gracilaria arcuata* Zanardini

*Gracilaria arcuata* Zanardini, 1858:265.—Feldmann, 1931a:14; 1951:107.

DISTRIBUTION.—Tunisia (La Marsa); Mediterranean (Egypt); Red Sea; Indian Ocean.

SPECIMEN STUDIED.—EGM 12: 1611(US).

REMARKS.—Rare; found in May growing on rocks in the sublittoral zone.

#### \**Gracilaria cervicornis* (Turner) J. Agardh

*Fucus cervicornis* Turner, 1809:131.

*Gracilaria cervicornis* (Turner) J. Agardh, 1852:504.—Gayral, 1958:364.

DISTRIBUTION.—Tunisia (Raf Raf, Ras Sidi Ali El Mekki, La Marsa); northeastern Atlantic (Morocco); Indian Ocean.

SPECIMENS STUDIED.—EGM 6: 1378, 1379; 7: 1388; 12: 1715(US), 1716(NHA), 1717(INSTOP).

REMARKS.—Occasional; found from September to December on rocks in the sublittoral zone.

### *Gracilaria verrucosa* (Hudson) Papenfuss

*Fucus verrucosus* Hudson, 1762:470.

*Gracilaria verrucosa* (Hudson) Papenfuss, 1950:195.—Ardre, 1970:115.—Gerloff and Geissler, 1971:771.—Güven and Östig, 1971:127.—Furnari and Scammacca, 1973:10.

*Gracilaria confervoides* (Linnaeus) Greville, 1830:liv.—Bornet, 1892:282.—Schiffner, 1926:302.—Funk, 1955:79.—Boergesen, 1929:81.—Feldmann, 1931b:237; 1937:273.—Nasr, 1940b:23.—Navarro and Uriarte, 1945:255.—Nasr and Aleem, 1949:276.—Gayral, 1958:358.—Edelstein, 1962:213; 1964:197.—Riedl, 1963:71.—Güven and Östig, 1971:127.

DISTRIBUTION.—Tunisia (La Marsa); north-eastern Atlantic (Portugal, Morocco, Canary Islands); Mediterranean (Spain, France, Italy, Adriatic Sea, Greece, Turkey, Israel, Algeria, Sicily, Libya, Egypt); Red Sea; Indian Ocean.

SPECIMENS STUDIED.—EGM 12: 1713(US), 1714(NHA).

REMARKS.—Occasional; found in January, April, May, and July on rocks in the sublittoral zone.

## Family PHYLLOPHORACEAE

### \**Gymnogongrus griffithsia* (Turner) Martius

*Fucus griffithsia* Turner, 1808:80.

*Gymnogongrus griffithsia* (Turner) Martius, 1833:27.—Bornet, 1892:276.—DeToni and Forti, 1913:12.—Boergesen, 1929:74.—Feldmann, 1931b:235; 1937:274.—Nasr and Aleem, 1949:278.—Funk, 1955:78.—Gayral, 1958:398.—Seoane-Camba, 1965:125.—Gerloff and Geissler, 1971:772.—Boudouresque and Perret, 1977:22.

DISTRIBUTION.—Tunisia (La Marsa, Hammamet); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (France, Corsica, Italy, Greece, Algeria, Libya, Egypt).

SPECIMENS STUDIED.—EGM 12: 1718–1720 (US), 1721(NHA); 16: 1927(INSTOP).

REMARKS.—Common; found in February, March, June, July, November, and December epiphytic on various algae.

### *Phyllophora nervosa* (de Candolle) Greville in J. Agardh

*Fucus nervosus* de Candolle, 1805:29.

*Phyllophora nervosa* (de Candolle) Greville in J. Agardh, 1842:94.—Bornet, 1892:274.—Muschler, 1910:304.—Funk, 1927:386.—Feldmann, 1931b:231; 1937:274.—Navarro and Uriarte, 1945:256.—Nasr and Aleem, 1949:273.—Dao, 1957:171.—Riedl, 1963:72.—Ben Alaya, 1970:211.—Furnari and Scammacca, 1970:222.—Gerloff and Geissler, 1971:773.—Güven and Östig, 1971:125.—Boudouresque and Perret, 1977:24.

DISTRIBUTION.—Tunisia (Cap Serrat, Ile Plane, mouth of Madjerda, Korbous); Mediterranean (Spain, France, Corsica, Adriatic Sea, Greece, Turkey, Algeria, Libya, Sicily, Egypt).

SPECIMENS STUDIED.—EGM 2: 1149–1156, 1183; 8: 1395, 1396, 1402–1405, 1420; 9: 1454–1467(US); 14: 1843–1844(NHA), 1845–1846 (INSTOP).

REMARKS.—Common; found in April, October, and December on rocks; some specimens dredged from 65 m.

### \**Phyllophora pseudoceranoi* (Gmelin) Newroth and A.R.A. Taylor

*Fucus pseudoceranoi* Gmelin, 1768:119.

*Phyllophora pseudoceranoi* (Gmelin) Newroth and A.R.A. Taylor, 1971:95.

*Phyllophora membranifolia* (Goodenough and Woodward) J. Agardh, 1842:93.—Ardre, 1970:118.—Gerloff and Geissler, 1971:773.

DISTRIBUTION.—Tunisia (Ile Plane, mouth of Madjerda, Korbous); northeastern Atlantic (Portugal); Mediterranean (Greece).

SPECIMENS STUDIED.—EGM 9: 1452–1453(US); 14: 1451(NHA), 1842(INSTOP).

REMARKS.—Common; found from January to



July and from October to December on rocks in the sublittoral zone.

### Family GIGARTINACEAE

#### *Gigartina acicularis* (Wulfen) Lamouroux

*Fucus acicularis* Wulfen, 1803:63.

*Gigartina acicularis* (Wulfen) Lamouroux, 1813:49.—Bornet, 1892:273.—Funk, 1927:385.—Boergesen, 1929:73.—Feldmann, 1931b:231; 1937:274.—Nasr, 1940b:25.—Navarro and Uriarte, 1945:257.—Aleem, 1951:251.—Gayral, 1958:408.—Riedl, 1963:73.—Seoane-Camba, 1965:117.—Ardre, 1970:126.—Ben Alaya, 1970:211.—Gerloff and Geissler, 1971:773.—Güven and Östig, 1971:127.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:21.

DISTRIBUTION.—Tunisia (Cap Serrat, La Marsa, Sidi Bou Said); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily, Adriatic Sea, Greece, Turkey, Egypt); Indian Ocean.

SPECIMENS STUDIED.—EGM 12: 1617(US), 1621(NHA); 13: 1755(INSTOP).

REMARKS.—Common; found from January to July and from October to December on rocks in the sublittoral zone.

### Family RISSOELLACEAE

#### *Rissoella verruculosa* (Bertoloni) J. Agardh

*Fucus verruculosus* Bertoloni, 1819:291.

*Rissoella verruculosa* (Bertoloni) J. Agardh, 1848:241.—Piccone, 1879:28; 1884:125.—DeToni, 1895:452.—Funk, 1927:390.—Feldmann, 1931b:235; 1937:90; 1961:507.—Navarro and Uriarte, 1945:253.—Furnari and Scamacca, 1970:222.—Boudouresque and Perret, 1977:27.

DISTRIBUTION.—Tunisia (Cap Serrat, Becha-teur); Mediterranean (Spain, France, Corsica, Italy, Algeria, Sicily, Libya).

SPECIMENS STUDIED.—EGM 2: 1208–1215(US), 1256(NHA); 3: 1298 (INSTOP).

REMARKS.—Common; found in April and July on rocks in the sublittoral zone.

### Order RHODYMENIALES

### Family RHODYMENIACEAE

#### \**Chrysymenia ventricosa* (Lamouroux)

J. Agardh

*Dumontia ventricosa* Lamouroux, 1813:45.

*Chrysymenia ventricosa* (Lamouroux) J. Agardh, 1876:322.—Bornet, 1892:288.—Funk, 1927:399.—Feldmann, 1937:274.—Navarro and Uriarte, 1945:258.—Edelstein, 1964:198.—Papenfuss, 1968:91.—Gerloff and Geissler, 1971:774.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:31.

DISTRIBUTION.—Tunisia (Djerba Island) Mediterranean (Spain, France, Corsica, Italy, Sicily, Greece, Israel, Egypt).

SPECIMENS STUDIED.—EGM 24: 2174(US), 2148(NHA).

REMARKS.—Rare; found in May on rocks in the sublittoral zone.

#### \**Rhodymenia pseudopalmata* (Lamouroux)

Silva

*Fucus pseudopalmatus* Lamouroux, 1805:29.

*Rhodymenia pseudopalmata* (Lamouroux) Silva, 1952:265.—

Ardre, 1970:132.—Gerloff and Geissler, 1971:774.

*Rhodymenia palmetta* (Esper) Greville, 1830:xlvi. —Piccone, 1879:28; 1884:126.—Funk, 1927:397.—Feldmann, 1931b:237.—Gayral, 1958:410.—Güven and Östig, 1971:126.

DISTRIBUTION.—Tunisia (Cap Zebib, Ile Plane, mouth of Madjerda, La Marsa, Sidi Bou Said); northeastern Atlantic (Portugal, Morocco); Mediterranean (Italy, Greece, Turkey, Algeria).

SPECIMENS STUDIED.—EGM 12: 1632(US), 1636(NHA), 1761(INSTOP).

REMARKS.—Occasional; found from January to December on rocks in the sublittoral zone.

### Family CHAMPIACEAE

#### *Champia parvula* (C. Agardh) Harvey

*Chondria parvula* C. Agardh, 1824:207.

*Champia parvula* (C. Agardh) Harvey, 1953:76.—Bornet, 1892:290.—Funk, 1927:405.—Boergesen, 1929:92.—

Feldmann, 1931b:238; 1937:274; 1961:507.—Navarro and Uriarte, 1945:262.—Aleem, 1951:251.—Gayral, 1958:420.—Seoane-Camba, 1965:128.—Ardre, 1970:137.—Gerloff and Geissler, 1971:774.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:31.

**DISTRIBUTION.**—Tunisia (Cap Serrat, Djerba Island, El Bibane); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily, Greece, Algeria, Egypt); Indian Ocean.

**SPECIMENS STUDIED.**—EGM 2: 1235(US); 29: 2265(NHA), 2268(INSTOP).

**REMARKS.**—Common; found from April to May epiphytic on various algae.

### ***Chylocladia verticillata* (Lightfoot) Bliding**

*Fucus verticillatus* Lightfoot, 1777:962.

*Chylocladia verticillata* (Lightfoot) Bliding, 1928:69.—Seoane-Camba, 1965:128.—Ardre, 1970:138.—Gerloff and Geissler, 1971:775.—Boudouresque and Perret, 1977:31.

*Chylocladia kaliformis* (Goodenough and Woodward) Hooker, 1833:397.—Bornet, 1892:291.—Petersen, 1918:19.—Funk, 1955:87.—Boergesen, 1929:93.—Feldmann, 1931b:238; 1937:275.—Edelstein, 1962:213; 1964:199.—Giaccone et al., 1973, table iv.

*Gastroclonium kaliforme* (Goodenough and Woodward) Ardisson, 1883:322.—Navarro and Uriarte, 1945:261.

**DISTRIBUTION.**—Tunisia (Kerkenna Island, Djerba Island, El Bibane); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily, Greece, Israel, Algeria).

**SPECIMENS STUDIED.**—EGM 19: 2034–2046; 20: 2095–2099, 2101; 24: 2154–2158(US); 29: 2255(NHA), 2256(INSTOP).

**REMARKS.**—Common; found from March to April on rocks and epiphytic on various algae.

### ***Gastroclonium clavatum* (Roth) Ardisson**

*Conferva clavata* Roth, 1797:160.

*Gastroclonium clavatum* (Roth) Ardisson, 1883:322.—DeToni and Forti, 1913:11.—Feldman, 1937:275; 1961:507.—Navarro and Uriarte, 1945:261.—Funk, 1955:88.—Seoane-Camba, 1965:130.—Gerloff and Geissler, 1971:775.—Boudouresque and Perret, 1977:32.

*Chylocladia mediterranea* J. Agardh, 1842:112.

*Lomentaria mediterranea* Endlicher, 1843:43.

**DISTRIBUTION.**—Tunisia (Nabeul, Monastir); northeastern Atlantic (Spain); Mediterranean (Spain, France, Corsica, Greece, Libya).

**SPECIMENS STUDIED.**—EGM 15: 1871–1874 (US), 1875(NHA), 1970(INSTOP).

**REMARKS.**—Occasional; found from April to March on rocks in the sublittoral zone.

## **Family LOMENTARIACEAE**

### ***Lomentaria articulata* (Hudson) Lyngbye**

*Ulva articulata* Hudson, 1778:569.

*Lomentaria articulata* (Hudson) Lyngbye, 1819:101.—Bornet, 1892:289.—Boergesen, 1929:90.—Feldmann, 1937:274.—Navarro and Uriarte, 1945:260.—Gayral, 1958:418.—Ben Alaya, 1970:211.—Furnari and Scammacca, 1970:223.—Gerloff and Geissler, 1971:775.—Boudouresque and Perret, 1977:33.

**DISTRIBUTION.**—Tunisia (Hammamet); northeastern Atlantic (Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Sicily, Corsica, Italy, Greece).

**SPECIMEN STUDIED.**—EGM 16: 1926(US).

**REMARKS.**—Rare; found in March on rocks in the sublittoral zone.

## **Order CERAMIALES**

### **Family CERAMIACEAE**

#### **\**Antithamnion cruciatum* (C. Agardh) Naegeli**

*Callithamnion cruciatum* C. Agardh, 1824:160.

*Antithamnion cruciatum* (C. Agardh) Naegeli, 1847:200.—Funk, 1955:110.—Feldmann, 1931b:247.—Riedl, 1963:75.—Ardre, 1970:145.—Gerloff and Geissler, 1971:776.—Güven and Östig, 1971:126.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:33.

**DISTRIBUTION.**—Tunisia (Cap Serrat); northeastern Atlantic (Portugal, Canary Islands); Mediterranean (France, Corsica, Italy, Sicily, Adriatic Sea, Greece, Turkey, Algeria).

**SPECIMENS STUDIED.**—EGM 2: 1144–1145(US), 1146(NHA), 1147(INSTOP).

REMARKS.—Occasional; found in April epiphytic on various algae.

**\**Callithamnion byssoides* Arnott in Hooker**

*Callithamnion byssoides* Arnott in Hooker, 1833:342.—Boergesen, 1930:42.—Feldmann, 1937:275.—Papenfuss, 1968:92.

DISTRIBUTION.—Tunisia (Monastir); northeastern Atlantic (Canary Islands); Mediterranean (France); Red Sea.

SPECIMEN STUDIED.—EGM 18: 2011(US).

REMARKS.—Rare; found in April on rocks in the sublittoral zone.

***Callithamnion granulatum* (Ducluzeau) C. Agardh**

*Ceramium granulatum* Ducluzeau, 1805:72.

*Callithamnion granulatum* (Ducluzeau) C. Agardh, 1828:177.—DeToni, 1895:454.—Funk, 1955:134.—Feldmann, 1931b:247.—Navarro and Uriarte, 1945:265.—Gayral, 1958:438.—Ardre, 1970:176.—Gerloff and Geissler, 1971:776.—Güven and Östig, 1971:126.—Boudouresque and Perret, 1977:64.

DISTRIBUTION.—Tunisia (Cap Serrat, Tabarka, Bechateur); northeastern Atlantic (Portugal, Morocco); Mediterranean (Spain, Corsica, Italy, Greece, Turkey, Algeria, Libya).

SPECIMENS STUDIED.—EGM 1: 2220; 2: 1132, 1133, 1244–1246(US), 1247(NHA); 3: 1336(INSTOP).

REMARKS.—Common; found in April and July epiphytic on various algae.

***Callithamnion tetragonum* (Withering) C. Agardh**

*Conferva tetragona* Withering, 1796:405.

*Callithamnion tetragonum* (Withering) C. Agardh, 1828:176.—Boergesen, 1930:46.—Feldmann, 1931b:247; 1937:275; 1961:507.—Funk, 1955:133.—Seoane-Camba, 1965:140.—Ardre, 1970:177.

DISTRIBUTION.—Tunisia (Gammarth); northeastern Atlantic (Portugal, Spain, Canary Islands); Mediterranean (France, Italy, Algeria).

SPECIMEN STUDIED.—EGM 11: 1605(US).

REMARKS.—Rare; found in May on rocks.

***Ceramium ciliatum* (Ellis) Ducluzeau**

*Conferva ciliata* Ellis, 1768:425.

*Ceramium ciliatum* (Ellis) Ducluzeau, 1805:64.—DeToni and Forti, 1913:7; 1914:290.—Schiffner, 1926:301.—Funk, 1955:118.—Boergesen, 1930:65.—Nasr, 1940b:26.—Navarro and Uriarte, 1945:268.—Nasr and Aleem, 1949:276.—Gayral, 1958:430.—Seoane-Camba, 1965:132.—Furnari and Scammacca, 1970:223.—Gerloff and Geissler, 1971:76.—Güven and Östig, 1971:126.—Boudouresque and Perret, 1977:65.

DISTRIBUTION.—Tunisia (Cap Serrat, Raouad, Gammarth, Monastir); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, Corsica, Italy, Greece, Sicily, Turkey, Libya, Egypt).

SPECIMENS STUDIED.—EGM 2: 1240–1243; 10: 1511–1514; 11: 1598–1604(US); 15: 1896(INSTOP); 18: 2008–2010(NHA).

REMARKS.—Common; found from March to May epiphytic on various algae and *Cymodocea nodosa*.

***Ceramium diaphanum* (Lightfoot) Roth**

*Conferva diaphana* Lightfoot, 1777:996.

*Ceramium diaphanum* (Lightfoot) Roth, 1806:154.—Piccone, 1879:28; 1884:123.—Petersen, 1918:14.—Schiffner, 1926:301.—Boergesen, 1930:63.—Feldmann, 1931b:248; 1937:276.—Mazoyer, 1938:325.—Nasr, 1940b:27.—Gayral, 1958:433.—Seoane-Camba, 1965:135.—Papenfuss, 1968:92.—Güven and Östig, 1971:126.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:66.

*Ceramium diaphanum* (Roth) Harvey, 1849: pl. 193.—Funk, 1955:119.—Ardre, 1970:155.—Gerloff and Geissler, 1971:777.

DISTRIBUTION.—Tunisia (Tabarka, Gammarth, La Marsa, Sidi Bou Said, Hammamet, Sousse, El Bibane); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (France, Corsica, Italy, Greece, Turkey, Algeria, Egypt); Red Sea; Indian Ocean.

SPECIMENS STUDIED.—EGM 1: 1211; 11: 1593–1597; 13: 1815–1817(US); 29: 2287(NHA), 2288(INSTOP).



REMARKS.—Common; found from January to May and in September and November epiphytic on various algae and *Cymodocea nodosa*.

### ***Ceramium gracillimum* Griffiths and Harvey in Harvey**

*Ceramium gracillimum* Griffiths and Harvey in Harvey, 1849, pl. 206.—Funk, 1955:117.—Nasr and Aleem, 1949:276.—Edelstein, 1964:202.—Seoane-Camba, 1965:133.—Papenfuss, 1968:93.—Andre, 1970:153.—Gerloff and Geissler, 1971:777.—Giaccone et al., 1973, table iv.

DISTRIBUTION.—Tunisia (La Marsa); north-eastern Atlantic (Portugal, Spain); Mediterranean (Italy, Sicily, Greece, Israel, Egypt); Red Sea.

SPECIMENS STUDIED.—EGM 16: 1928(US), 1929(NHA).

REMARKS.—Occasional; found in September epiphytic on *Cymodocea nodosa*.

### ***Ceramium rubrum* (Hudson) C. Agardh**

*Conferva rubra* Hudson, 1762:486.

*Ceramium rubrum* (Hudson) C. Agardh, 1817:60.—Boergesen, 1930:63.—Feldmann, 1931b:248.—Mazoyer, 1938:320.—Nasr, 1940b:27.—Navarro and Uriarte, 1945:268.—Nasr and Aleem, 1949:276.—Aleem, 1951:251.—Funk, 1955:119.—Gayral, 1958:428.—Riedl, 1963:75.—Seoane-Camba, 1965:133.—Andre, 1970:157.—Furnari and Scammacca, 1970:223.—Gerloff and Geissler, 1971:778.—Güven and Östig, 1971:126.—Boudouresque and Perret, 1977:67.

DISTRIBUTION.—Tunisia (Bechateur, Gammarth, La Marsa, Monastir); northeastern Atlantic (Portugal, Spain, Corsica, Italy, Sicily, Turkey, Adriatic Sea, Greece, Algeria, Egypt); Red Sea.

SPECIMENS STUDIED.—EGM 3: 1333–1335: 11: 1590–1592; 12: 1729, 1730, 1732(US), 1733(NHA); 18: 2007(INSTOP).

REMARKS.—Abundant; found from January to August and from October to December on rocks, epiphytic on various algae and *Cymodocea nodosa*.

### ***Ceramium tenerrimum* (Martens) Okamura**

*Hormoceras tenerrimum* Martens, 1866:146.

*Ceramium tenerrimum* (Martens) Okamura, 1933:112.—Funk,

1955:117.—Mazoyer, 1937:540; 1938:321.—Seoane-Camba, 1965:135.—Gerloff and Geissler, 1971:778.—Giaccone et al., 1973, table iv.

DISTRIBUTION.—Tunisia (Djerba Island); northeastern Atlantic (Spain, Morocco); Mediterranean (Italy, Sicily, Greece, Algeria).

SPECIMENS STUDIED.—EGM: 24: 2142–2144(US), 2145(NHA), 2146(INSTOP).

REMARKS.—Rare; found in March epiphytic on *Cymodocea nodosa*.

### ***Ceramium tenuissimum* (Lyngbye) J. Agardh**

*Ceramium diaphanum* var. *tenuissimum* Lyngbye, 1819:120.

*Ceramium tenuissimum* (Lyngbye) J. Agardh, 1851:120.—Feldmann, 1931b:248; 1937:276.—Mazoyer, 1938:325.—Navarro and Uriarte, 1945:268.—Nasr and Aleem, 1949:270.—Funk, 1955:117.—Gerloff and Geissler, 1971:778.—Güven and Östig, 1971:126.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:68.

DISTRIBUTION.—Tunisia (La Marsa); north-eastern Atlantic (Portugal); Mediterranean (Spain, France, Corsica, Italy, Sicily, Greece, Turkey, Algeria, Libya, Egypt); Red Sea; Indian Ocean.

SPECIMEN STUDIED.—EGM 12: 1539(US).

REMARKS.—Occasional; found in May and August on *Cymodocea nodosa*.

### **\**Griffithsia flosculosa* (Ellis) Batters in Newton**

*Conferva flosculosa* Ellis, 1768:425.

*Griffithsia flosculosa* (Ellis) Batters in Newton, 1931:368.—Funk, 1955:129.—Feldmann, 1961:507.—Seoane-Camba, 1965:138.—Andre, 1970:167.—Gerloff and Geissler, 1971:779.—Furnari and Scammacca, 1973:14.—Boudouresque and Perret, 1977:69.

*Griffithsia setacea* C. Agardh, 1817:xxviii.—Bornet, 1892:324.

DISTRIBUTION.—Tunisia (Cap Serrat); north-eastern Atlantic (Portugal, Spain); Mediterranean (Corsica, Italy, Greece, Sicily).

SPECIMEN STUDIED.—EGM 2: 1171(US).

REMARKS.—Rare; found in April epiphytic on *Cymodocea nodosa*.

### **\**Griffithsia phyllamphora* J. Agardh**

*Griffithsia phyllamphora* J. Agardh, 1842:77.—Bornet, 1892:324.—Boergesen, 1930:38.—Navarro and Uriarte, 1945:

263.—Funk, 1955:127.—Dao, 1957:172.—Riedl, 1963:75.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:69.

**DISTRIBUTION.**—Tunisia (Sidi Bou Said); northeastern Atlantic (Canary Islands); Mediterranean (Spain, Corsica, Italy, Sicily, Adriatic Sea).

**SPECIMEN STUDIED.**—EGM 13: 1808(US).

**REMARKS.**—Rare; found in July epiphytic on various algae.

**\**Anotrichium tenue* (C. Agardh) Naegeli**

*Griffithsia tenuis* C. Agardh, 1828:131.—Boergesen, 1930:31.—Edelstein, 1964:199.—Gerloff and Geissler, 1971:779.

*Anotrichium tenue* (C. Agardh) Naegeli, 1861:399.

**DISTRIBUTION.**—Tunisia (Kerkenna Island); northeastern Atlantic (Canary Islands); Mediterranean (Greece, Israel, Algeria); Red Sea; Indian Ocean.

**SPECIMENS STUDIED.**—EGM 20: 2093(US), 2094(NHA).

**REMARKS.**—Occasional; found in April on rocks in the sublittoral zone.

***Spyridia filamentosa* (Wulfen) Harvey**

*Fucus filamentosus* Wulfen, 1803:64.

*Spyridia filamentosa* (Wulfen) Harvey, 1833:336.—Bornet, 1892:333.—DeToni and Forti, 1913:7.—Petersen, 1918:15.—Schiffner, 1926:302.—Pottier, 1929:337.—Boergesen, 1930:61.—Feldmann, 1931b:247; 1937:276.—Nasr, 1940b:30.—Navarro and Uriarte, 1945:267.—Funk, 1955:120.—Dao, 1957:172.—Edelstein, 1964:202.—Seoane-Camba, 1965:136.—Ben Alaya, 1970:211.—Gerloff and Geissler, 1971:780.—Güven and Östig, 1971:126.—Giaccone et al., 1973, table iv.—Harotinidis and Tsekos, 1975:219.—Boudouresque and Perret, 1977:72.

**DISTRIBUTION.**—Tunisia (Sidi Bou Said, Korbous, Monastir, Djerba Island, Kerkenna Island, Zarzis); northeastern Atlantic (Spain, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily, Greece, Turkey, Algeria, Libya, Egypt); Red Sea; Indian Ocean.

**SPECIMENS STUDIED.**—EGM 4: 1344–1348; 13: 1773–1779; 14: 1832–1836; 18: 1994, 1995; 21:

2107–2111; 24: 2194; 26: 2208–2214(US); 28: 2246–2247 (NHA), 2248–2249(INSTOP).

**REMARKS.**—Abundant; found in April, May, July, and October epiphytic on various algae.

***Wrangelia penicillata* C. Agardh**

*Wrangelia penicillata* C. Agardh, 1828:138.—Bornet, 1892:265.—DeToni, 1895:452.—DeToni and Forti, 1913:12.—Schiffner, 1926:300.—Boergesen, 1927:94.—Feldmann, 1937:276.—Navarro and Uriarte, 1945:269.—Funk, 1955:129.—Dao, 1957:172.—Riedl, 1963:75.—Edelstein, 1964:200.—Gerloff and Geissler, 1971:780.—Güven and Östig, 1971:126.—Giaccone et al., 1973, table iv.—Harotinidis and Tsekos, 1975:220.—Boudouresque and Perret, 1977:73.

**DISTRIBUTION.**—Tunisia (Monastir, Djerba Island, Zarzis); northeastern Atlantic (Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily, Adriatic Sea, Greece, Turkey, Israel, Libya); Indian Ocean.

**SPECIMENS STUDIED.**—EGM 18: 1991–1993; 24: 2183, 2186–2193, 2197–2201(US); 28: 2239–2243(NHA), 2244–2245(INSTOP).

**REMARKS.**—Common; found in April, May, and October epiphytic on various algae.

**Family DELESSERIACEAE**

**\**Acrosorium uncinatum* (Turner) Kylin**

*Fucus laceratus* var. *uncinatus* Turner, 1808:153.

*Acrosorium uncinatum* (Turner) Kylin, 1924:78.—Boergesen, 1930:154.—Feldmann, 1931b:238; 1937:278.—Navarro and Uriarte, 1945:272.—Funk, 1955:103.—Gayral, 1958:461.—Seoane-Camba, 1965:142.—Ardre, 1970:188.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:90.

**DISTRIBUTION.**—Tunisia (Sidi Bou Said, Korbous, Sousse); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily, Algeria, Libya); Indian Ocean.

**SPECIMENS STUDIED.**—EGM 2: 1186; 13: 1821–1825; 14: 1861–1863(US), 1864(NHA), 1865(INSTOP).

REMARKS.—Common; found in April and October epiphytic on various algae.

**\**Hypoglossum woodwardii* Kuetzing**

*Hypoglossum woodwardii* Kuetzing, 1843:444.—Boergesen, 1930:153.—Feldmann, 1931b:238; 1937:278.—Navarro and Uriarte, 1945:269.—Funk, 1955:106.—Gayral, 1958:456.—Edelstein, 1964:207.—Seoane-Camba, 1965:141.—Ardre, 1970:179.—Gerloff and Geissler, 1971:781.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:91.

DISTRIBUTION.—Tunisia (Tabarka); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily, Greece, Algeria, Libya).

SPECIMEN STUDIED.—EGM 1: 1540(US).

REMARKS.—Rare; found in April epiphytic on various algae.

**\**Myriogramme distromatica* Rodriguez ex Boudouresque**

*Myriogramme distromatica* Rodriguez ex Boudouresque, 1971:76.—Boudouresque and Perret, 1977:92.

DISTRIBUTION.—Tunisia (Sidi Bou Said); Mediterranean (Corsica).

SPECIMEN STUDIED.—EGM 13: 1789(US).

REMARKS.—Rare; found in October epiphytic on *Cymodocea nodosa*.

**Family DASYACEAE**

**\**Dasya baillouviana* (Gmelin) Montagne**

*Fucus baillouviana* Gmelin, 1768:165.

*Dasya baillouviana* (Gmelin) Montagne, 1841:164.

*Dasya elegans* (Martens) C. Agardh, 1828:117.—Edelstein, 1964:205.—Güven and Östig, 1971:127.

*Dasya pedicellata* C. Agardh, 1824:211.—Boergesen, 1930:136.—Gerloff and Geissler, 1971:782.—Güven and Östig, 1971:127.—Giaccone et al., 1973, table iv.

DISTRIBUTION.—Tunisia (Kerkenna Island, Djerba Island); northeastern Atlantic (Canary Islands); Mediterranean (Sicily, Greece, Turkey, Israel); Indian Ocean.

SPECIMENS STUDIED.—EGM 20: 2057–2059, 2061; 24: 2178–2179(US), 2180–2181(NHA), 2182(INSTOP).

REMARKS.—Common; found in March and April on rocks in the sublittoral zone.

***Heterosiphonia wurdemanni* (Bailey in Harvey) Falkenberg**

*Dasya wurdemanni* Bailey in Harvey, 1853:64.

*Heterosiphonia wurdemanni* (Bailey in Harvey) Falkenberg, 1901:638.—Schiffner, 1926:303.—Boergesen, 1930:137.—Feldmann, 1937:277.—Nasr, 1940a:7.—Nasr and Aleem, 1949:270.—Aleem, 1951:252.—Funk, 1955:147.—Dao, 1957:173.—Edelstein, 1964:206.—Gerloff and Geissler, 1971:782.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:89.

DISTRIBUTION.—Tunisia (Djerba Island, El Bibane); northeastern Atlantic (Canary Islands); Mediterranean (France, Corsica, Italy, Sicily, Greece, Israel, Egypt).

SPECIMENS STUDIED.—EGM 26: 2222(US), 2223(NHA).

REMARKS.—Occasional; found in April and October on rocks in the sublittoral zone.

**Family RHODOMELACEAE**

***Acanthophora najadiformis* (Delile) Papenfuss**

*Fucus najadiformis* Delile, 1813:80.

*Acanthophora najadiformis* (Delile) Papenfuss, 1968:96.

*Acanthophora delile* Lamouroux, 1813:132.—Muschler, 1910:307.—Funk, 1927:446.—Nasr and Aleem, 1949:277.—Feldmann, 1951:107.—Furnari and Scammacca, 1970:225.—Gerloff and Geissler, 1971:783.—Boudouresque and Perret, 1977:73.

DISTRIBUTION.—Tunisia (Djerba Island); Mediterranean (Sicily, Corsica, Italy, Greece, Israel, Libya, Egypt); Indian Ocean.

SPECIMENS STUDIED.—EGM 23: 2134(US), 2137(NHA).

REMARKS.—Occasional; found in June on rocks in the sublittoral zone.



***Alsidium corallinum* C. Agardh**

*Alsidium corallinum* C. Agardh, 1827:639.—Schiffner, 1926:303.—Boergesen, 1930:108.—Feldmann, 1937:277.—Navarro and Uriarte, 1945:276.—Aleem, 1951:252.—Funk, 1955:139.—Edelstein, 1964:203.—Gerloff and Geissler, 1971:783.—Boudouresque and Perret, 1977:74.

DISTRIBUTION.—Tunisia (La Marsa); north-eastern Atlantic (Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Greece, Israel, Egypt).

SPECIMENS STUDIED.—EGM 12: 1744–1749 (US), 1750(NHA), 1751(INSTOP).

REMARKS.—Occasional; found in February, June, September, and November on rocks in the sublittoral zone.

**\**Chondria coerulescens* (Crouan and Crouan) Falkenberg**

*Laurencia coerulescens* Crouan and Crouan, 1867:154.

*Chondria coerulescens* (Crouan and Crouan) Falkenberg, 1901:205.—Funk, 1927:444.—Gayral, 1958:476.—Seoane-Camba, 1965:153.—Ardre, 1970:223.

DISTRIBUTION.—Tunisia (Raouad, La Marsa, Sidi Bou Said); northeastern Atlantic (Portugal, Spain, Morocco); Mediterranean (Italy).

SPECIMENS STUDIED.—EGM 10: 1509–1510 (US); 12: 1727–1728(NHA); 13: 1814(INSTOP).

REMARKS.—Common; found in March, June, October, and December on rocks in the sublittoral zone.

***Chondria dasyphylla* (Woodward) C. Agardh**

*Fucus dasyphyllus* Woodward, 1794:239.

*Chondria dasyphylla* (Woodward) C. Agardh, 1817:xviii.—Bornet, 1892:304.—Muschler, 1910:307.—Fremy, 1925:28.—Schiffner, 1926:303.—Funk, 1927:444.—Boergesen, 1930:81.—Feldmann, 1931b:242.—Gayral, 1958:474.—Gerloff and Geissler, 1971:783.—Furnari and Scammacca, 1973:16.

DISTRIBUTION.—Tunisia (Cap Serrat, Tabarka, Gammarth, La Marsa, El Bibane); northeastern Atlantic (Portugal, Morocco, Canary Islands); Mediterranean (Greece, Algeria, Libya, Sicily, Egypt); Indian Ocean.

SPECIMENS STUDIED.—EGM 1: 1219; 2: 1218, 1221, 1224; 11: 1585–1589; 12: 1724–1726; 20: 2047–2056; 29: 2269–2271(US), 2272(NHA), 2273(INSTOP).

REMARKS.—Common; found from January to May and in November and December on rocks in the sublittoral zone.

***Chondria tenuissima* (Goodenough and Woodward) C. Agardh**

*Fucus tenuissimus* Goodenough and Woodward, 1797:215.

*Chondria tenuissima* (Goodenough and Woodward) C. Agardh, 1822:352.—Bornet, 1892:303.—Schiffner, 1926:303.—Boergesen 1930:80.—Feldmann, 1931b:243; 1937:276.—Navarro and Uriarte, 1945:276.—Aleem, 1951:252.—Funk, 1955:139.—Seoane-Camba, 1965:154.—Ardre, 1970:221.—Gerloff and Geissler, 1971:783.—Güven and Östig, 1971:126.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:76.

DISTRIBUTION.—Tunisia (Bechateur, Raouad, Gammarth, Kerkenna Island, Djerba Island); northeastern Atlantic (Portugal, Spain, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily, Greece, Turkey, Algeria, Egypt); Red Sea; Indian Ocean.

SPECIMENS STUDIED.—EGM 3: 1332; 10: 1506–1508; 11: 1583(US); 24: 2149–2159(NHA), 2152–2153(INSTOP).

REMARKS.—Common; found from March to May and in July and August on rocks in the sublittoral zone.

**\**Digenia simplex* (Wulfen) C. Agardh**

*Conferva simplex* Wulfen, 1803:17.

*Digenia simplex* (Wulfen) C. Agardh, 1822:388.—Muschler, 1910:308.—Funk, 1927:442.—Navarro and Uriarte, 1945:280.—Nasr and Aleem, 1949:256.—Aleem, 1951:252.—Dao, 1957:172.—Gerloff and Geissler, 1971:783.—Güven and Östig, 1971:126.—Lipkin and Safriel, 1971:11.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:76.

DISTRIBUTION.—Tunisia (Cap Serrat, Nabeul, Djerba Island); Mediterranean (Spain, Corsica, Italy, Sicily, Greece, Turkey, Israel, Egypt); Red Sea; Indian Ocean.

**SPECIMENS STUDIED.**—EGM 2: 1270–1275, 1281(US); 15: 1876(INSTOP); 27: 2231–2233 (NHA).

**REMARKS.**—Common; found in April, July, and October on rocks in the sublittoral zone.

### *Halopitys incurvus* (Hudson) Batters

*Fucus incurvus* Hudson, 1762:470.

*Halopitys incurvus* (Hudson) Batters, 1902:78.—Aleem, 1951: 252.—Gayral, 1958:496.—Seoane-Camba, 1965:152.—Ardre, 1970:220.—Gerloff and Geissler, 1971:784.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:77.

*Halopitys pinastroides* (Gmelin) Kuetzing, 1843:433.—Bornet, 1892:303.—Muschler, 1910:309.—DeToni and Forti, 1914:298.—Schiffner, 1926:304.—Boergesen, 1930:117.—Feldmann, 1931b:245.—Navarro and Uriarte, 1945: 281.—Funk, 1955:145.

**DISTRIBUTION.**—Tunisia (Cap Serrat, Tabarka, Bechateur, Ile Plane, Ras Sidi Ali El Mekki, mouth of Madjerda, Raouad, Sidi Bou Said, La Marsa, Korbous, Nabeul, Gammarth, Monastir, Djerba Island); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, Corsica, Italy, Sicily, Greece, Algeria, Libya, Egypt).

**SPECIMENS STUDIED.**—EGM 2: 1148, 1157–1163, 1250–1251; 3: 1323; 8: 1393, 1394; 9: 1477, 1478; 10: 1500–1504; 11: 1578–1580; 12: 1709–1712; 13: 1802–1806 14: 1852–1855; 15: 1893–1894(US); 18: 2005–2006(NHA); 23: 2135–2136(INSTOP).

**REMARKS.**—Abundant; found from March to May and from July to December on rocks; some specimens dredged from 15 to 23 m.

### *Herposiphonia tenella* (C. Agardh) Schmitz

*Hutchinsia tenella* C. Agardh, 1828:105.

*Herposiphonia tenella* (C. Agardh) Schmitz, 1889:449.

*Herposiphonia tenella* (C. Agardh) Ambronn, 1880:198.—DeToni and Forti, 1913:9.—Boergesen, 1930:110.—Funk, 1955:142.—Gerloff and Geissler, 1971:784.—Boudouresque and Perret, 1977:79.

*Herposiphonia tenella* (C. Agardh) Naegeli, 1846:238.—Feldmann, 1931b:245; 1961:508.—Navarro and Uriarte, 1945: 280.—Seoane-Camba, 1965:147.—Ardre, 1970:213.—Guven and Östig, 1971:126.—Giaccone et al., 1973, table iv.

**DISTRIBUTION.**—Tunisia (Monastir); northeastern Atlantic (Portugal, Spain, Canary Islands); Mediterranean (Spain, Corsica, Italy, Sicily, Greece, Turkey, Algeria, Libya); Red Sea; Indian Ocean.

**SPECIMENS STUDIED.**—EGM 18: 1999(US), 2000(NHA), 2001(INSTOP).

**REMARKS.**—Rare; found in April epiphytic on various algae.

### *Herposiphonia tenella* forma *secunda* (C. Agardh) Hollenberg

*Herposiphonia secunda* (C. Agardh) Falkenberg, 1901:307.

*Hutchinsia secunda* C. Agardh, 1824:149.

*Herposiphonia tenella* forma *secunda* (C. Agardh) Hollenberg, 1968:556.

*Herposiphonia secunda* (C. Agardh) Ambronn, 1880:197.—Nasr and Aleem, 1949:277.—Aleem, 1951:252.—Dao, 1957:172.—Gerloff and Geissler, 1971:784.

*Herposiphonia secunda* (C. Agardh) Naegeli, 1846:238.—Muschler, 1910:308.—Schiffner, 1926:303.—Boergesen, 1930: 111.—Feldmann, 1931b:245.—Navarro and Uriarte, 1945:281.—Funk, 1955:142.—Seoane-Camba, 1965: 147.—Ardre, 1970:214.—Furnari and Scammacca, 1970: 161.

**DISTRIBUTION.**—Tunisia (Sidi Bou Said, Djerba Island); northeastern Atlantic (Portugal, Spain, Canary Islands), Mediterranean (Spain, Corsica, Italy, Sicily, Greece, Algeria, Libya, Egypt); Indian Ocean.

**SPECIMENS STUDIED.**—EGM 24: 2292(US); 25: 2204(NHA), 2205(INSTOP).

**REMARKS.**—Occasional; found in February, March, and May epiphytic on various algae.

### *Laurencia obtusa* (Hudson) Lamouroux

*Fucus obtusus* Hudson, 1778:586.

*Laurencia obtusa* (Hudson) Lamouroux, 1813:42.—Piccone, 1879:31; 1884:133.—Bornet, 1892:300.—Patouillard, 1897:19.—Muschler, 1910:306.—DeToni and Forti, 1913: 10.—Schiffner, 1926:302.—Funk, 1927:447.—Pottier, 1929:343.—Boergesen, 1930:67.—Feldmann, 1931b:243, 1937:276.—Navarro and Uriarte, 1945:273.—Nasr and Aleem, 1949:278.—Aleem, 1951:251.—Dao, 1957:172.—Gayral, 1958:482.—Riedl, 1963:77.—Seoane-Camba, 1965:155.—Ardre, 1970:224.—Gerloff and Geissler, 1971:

784.—Güven and Östig, 1971:126.—Boudouresque and Perret, 1977:79.

**DISTRIBUTION.**—Tunisia (Bechateur, Bizerte, Raf Raf, Raouad, Gammarth, La Marsa, Sidi Bou Said, Korbous, Monastir, Gabes, Kerkenna Island, Djerba Island, El Bibane); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Sicily, Italy, Adriatic Sea, Greece, Israel, Algeria, Libya, Egypt); Red Sea; Indian Ocean.

**SPECIMENS STUDIED.**—EGM 1: 1212–1217; 2: 1140–1143, 1164–1167, 1179–1182, 1187–1216, 1219; 3: 1324–1331; 4: 1350; 5: 1371, 1372; 6: 1380–1381; 10: 1505; 11: 1581, 1582; 12: 1708; 13: 1810; 14: 1856–1860; 15: 1895; 18: 2002–2004; 19: 2040–2042; 20: 2078–2092; 21: 2113–2117; 22: 2132; 23: 2293–2296; 24: 2159–2170; 25: 2202–2203(US); 26: 2224–2230(NHA); 29: 2274–2286(INSTOP).

**REMARKS.**—Abundant; found from February to July and in September and October on rocks and epiphytic on various algae; some specimens dredged from 31 m.

### **\**Laurencia papillosa* (Forsskal) Greville**

*Fucus papillosus* Forsskal, 1775:190.

*Laurencia papillosa* (Forsskal) Greville, 1830:52.—Muschler, 1910:306.—Feldmann, 1937:276.—Nasr and Aleem, 1949:276.—Aleem, 1951:251.—Funk, 1955:141.—Gerloff and Geissler, 1971:785.—Güven and Östig, 1971:126.—Lipkin and Safriel, 1971:8.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:81.

*Laurencia papillosa* (C. Agardh) Greville, 1830:lii.—DeToni and Forti, 1913:11.

**DISTRIBUTION.**—Tunisia (Ras Sidi Ali El Mekki, Raouad, Gammarth, La Marsa, Sidi Bou Said, Nabeul, Zarzis); Mediterranean (France, Corsica, Italy, Sicily, Greece, Turkey, Israel, Libya, Egypt); Red Sea; Indian Ocean.

**SPECIMENS STUDIED.**—EGM 7: 1386; 10: 1497–1499; 11: 1572, 1573, 1576, 1577; 12: 1707; 13: 1807; 15: 1891–1892(US); 28: 2254(INSTOP); 29: 2265–2266(NHA).

**REMARKS.**—Abundant; found in March, May, September, and October on rocks and epiphytic on various algae.

### **\**Laurencia pinnatifida* (Gmelin) Lamouroux**

*Fucus pinnatifidus* Gmelin, 1792:1385.

*Laurencia pinnatifida* (Gmelin) Lamouroux, 1813:42.—Bornet, 1892:301.—Funk, 1927:449.—Boergesen, 1930:69.—Feldmann, 1931b:243; 1937:276.—Navarro and Uriarte, 1945:275.—Aleem, 1951:251.—Gayral, 1958:478.—Seoane-Camba, 1965:154.—Ardre, 1970:225.—Gerloff and Geissler, 1971:785.—Güven and Östig, 1971:126.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:81.

**DISTRIBUTION.**—Tunisia (Cap Serrat, Bechateur, Cap Zebib); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily, Greece, Turkey, Algeria, Egypt); Red Sea.

**SPECIMENS STUDIED.**—EGM 2: 1370(US); 8: 1392(NHA).

**REMARKS.**—Common; found in February, April, and July in the sublittoral zone.

### **\**Lophosiphonia subadunca* (Kuetzing) Falkenberg**

*Polysiphonia subadunca* Kuetzing, 1843:418.

*Lophosiphonia subadunca* (Kuetzing) Falkenberg, 1901:496.—Navarro and Uriarte, 1945:281.—Funk, 1955:142.—Gerloff and Geissler, 1971:786.

**DISTRIBUTION.**—Tunisia (Raf Raf); Mediterranean (Spain, Greece).

**SPECIMEN STUDIED.**—EGM 6: 1376(US).

**REMARKS.**—Rare; found in September epiphytic on various algae.

### **\**Lophosiphonia sacchoriza* Collins and Hervey**

*Lophosiphonia sacchoriza* Collins and Hervey, 1917:127.

**DISTRIBUTION.**—Tunisia (Kerkenna Island).

**SPECIMEN STUDIED.**—EGM 20: 2077(US).

**REMARKS.**—Rare; found in April epiphytic on various algae.

### ***Polysiphonia elongata* (Hudson) Harvey in Hooker**

*Conferva elongata* Hudson, 1778:599.

*Polysiphonia elongata* (Hudson) Harvey in Hooker, 1833:333.—Bornet, 1892:308.—Muschler, 1910:307.—Boergesen,



1930:93.—Feldmann, 1937:277.—Navarro and Uriarte, 1945:278.—Aleem, 1951:252.—Funk, 1955:136.—Edelstein, 1964:204.—Ardre, 1970:206.—Ben Alaya, 1970:212.—Gerloff and Geissler, 1971:786.—Furnari and Scammacca, 1973:16.—Boudouresque and Perret, 1977:83.

**DISTRIBUTION.**—Tunisia (Gammarth); north-eastern Atlantic (Portugal, Canary Islands); Mediterranean (Spain, France, Corsica, Greece, Turkey, Israel, Libya, Egypt).

**SPECIMENS STUDIED.**—EGM 11: 1537–1538 (US).

**REMARKS.**—Occasional; found in May epiphytic on various algae.

**\**Polysiphonia macrocarpa* Harvey in Mackay**

*Polysiphonia macrocarpa* Harvey in Mackay, 1836:206.—Bornet, 1892:306.—Boergesen, 1930:82.—Gayral, 1958:465.—Ardre, 1970:202.

**DISTRIBUTION.**—Tunisia (Raouad, Djerba Island); northeastern Atlantic (Morocco, Canary Islands).

**SPECIMENS STUDIED.**—EGM 10: 1487, 1488; 20: 2064(US), 2069(NHA), 2007 (INSTOP).

**REMARKS.**—Common; found in January, March, and August epiphytic on various algae and *Cymodocea nodosa*.

***Polysiphonia opaca* (C. Agardh) Zanardini**

*Hutchinsia opaca* C. Agardh, 1824:148.

*Polysiphonia opaca* (C. Agardh) Zanardini, 1842:63.—Schiffner, 1926:303.—Boergesen, 1930:104.—Feldmann, 1937:277.—Navarro and Uriarte, 1945:379.—Nasr and Aleem, 1949:277.—Aleem, 1951:252.—Funk, 1955:136.—Gerloff and Geissler, 1971:787.—Güven and Östig, 1971:126.—Lipkin and Safriel, 1971:8.—Gaiccone et al., 1973, table iv.—Boudouresque and Perret, 1977:84.

**DISTRIBUTION.**—Tunisia (Tabarka, Monastir, Djerba Island); northeastern Atlantic (Canary Islands); Mediterranean (Spain, France, Corsica, Sicily, Greece, Turkey, Israel, Egypt).

**SPECIMENS STUDIED.**—EGM 1: 1188–1190; 18: 1985–1990(US); 24: 2138 (INSTOP), 2184–2185(NHA).

**REMARKS.**—Common; found from April to May epiphytic on various algae.

**\**Polysiphonia urceolata* (Lightfoot in Dillwyn) Greville**

*Conferva urceolata* Lightfoot in Dillwyn, 1807:82.

*Polysiphonia urceolata* (Lightfoot in Dillwyn) Greville, 1824:309.—Gerloff and Geissler, 1971:788.—Güven and Östig, 1971:126.

**DISTRIBUTION.**—Tunisia (Kerkenna Island); Mediterranean (Greece, Turkey).

**SPECIMENS STUDIED.**—EGM 20: 2063, 2071–2073(US), 2074(NHA), 2075(INSTOP).

**REMARKS.**—Occasional; found in April on rocks.

**\**Polysiphonia violacea* (Roth) Greville in Harvey**

*Ceramium violaceum* Roth, 1797:150.

*Polysiphonia violacea* (Roth) Greville in Harvey, 1849:209.—Funk, 1927:135.—Boergesen, 1930:87.—Furnari and Scammacca, 1970:225.

**DISTRIBUTION.**—Tunisia (Kerkenna Island); northeastern Atlantic (Canary Islands); Mediterranean (Italy, Sicily).

**SPECIMENS STUDIED.**—EGM 19: 2032(US), 2033(NHA), 2034(INSTOP).

**REMARKS.**—Occasional; found in April epiphytic on various algae.

**\**Pterosiphonia complanata* (Clemente) Falkenberg**

*Fucus complanatus* Clemente, 1807:316.

*Pterosiphonia complanata* (Clemente) Falkenberg, 1901:271.—Gayral, 1958:484.—Seoane-Camba, 1965:150.—Ardre, 1970:192.—Harotinidis and Tsekos, 1975:219.  
*Polysiphonia complanata* J. Agardh, 1863:933.—Bornet, 1892:317.

**DISTRIBUTION.**—Tunisia (Monastir, Kerkenna Island, El Bibane); northeastern Atlantic (Portugal, Spain); Mediterranean (Greece).

**SPECIMENS STUDIED.**—EGM 18: 1979–1981; 19:

2035–2037(US); 29: 2257(NHA), 2258(INSTOP).

REMARKS.—Common; found in January, April, June, and August epiphytic on various algae.

**\**Pterosiphonia pennata* (C. Agardh)  
Falkenberg**

*Hutchinsia pennata* C. Agardh, 1824:146.

*Pterosiphonia pennata* (C. Agardh) Falkenberg, 1901:263.—Funk, 1955:143.—Ardre, 1970:194.—Harotinidis and Tsekos, 1975:219.

*Pterosiphonia pennata* (Roth) Falkenberg, 1901:263.—Boergesen, 1930:108.—Feldmann, 1931b:244; 1937:277.—Nasr and Aleem, 1949:277.—Aleem, 1951:252.—Gayral, 1958:488.—Seoane-Camba, 1965:150.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:85.

DISTRIBUTION.—Tunisia (La Marsa); north-eastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (France, Corsica, Italy, Sicily, Greece, Algeria, Egypt).

SPECIMENS STUDIED.—EGM 12: 1639–1646 (US), 1647(NHA), 1648(INSTOP).

REMARKS.—Common; found year round on sandy substrate.

***Rytiphloea tinctoria* (Clemente) C. Agardh**

*Fucus tinctorius* Clemente, 1807:316.

*Rytiphloea tinctoria* (Clemente) C. Agardh, 1824:160.—Bornet, 1892:302.—Muschler, 1910:308.—DeToni and Forti, 1913:8; 1914:290.—Funk, 1927:454.—Boergesen, 1930:116.—Feldmann, 1931b:245; 1937:277.—Navarro and Uriarte, 1945:281.—Aleem, 1951:252.—Dao, 1957:173.—Gayral, 1958:498.—Edelstein, 1962:213; 1964:205.—Riedl, 1963:77.—Seoane-Camba, 1965:152.—Ardre, 1970:220.—Ben Alaya, 1970:211.—Gerloff and Geissler, 1971:788.—Güven and Östig, 1971:126.—Giaccone et al.,

1973, table iv.—Harotinidis and Tsekos, 1975:219.—Boudouresque and Perret, 1977:86.

DISTRIBUTION.—Tunisia (Bechateur, Raf Raf, Ile Plane, Gammarth, La Marsa, Sidi Bou Said, Korbous, Kerkenna Island, Gabes, Djerba Island, Zarzis); northeastern Atlantic (Portugal, Spain, Morocco, Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily, Adriatic Sea, Greece, Turkey, Israel, Algeria, Libya, Egypt); Red Sea.

SPECIMENS STUDIED.—EGM 3: 1299; 6: 1373, 1374; 8: 1406; 11: 1549–1551; 12: 1630, 1631; 13: 1758–1760; 14: 1831; 21: 2104–2106; 22: 2118–2123, 25: 2206(US); 28: 2237(NHA); 29: 2260 (INSTOP).

REMARKS.—Abundant; found from February to July and from September to December on vertical surfaces of rocks; some specimens dredged from 15 to 23 m.

***Vidalia volubilis* (Linnaeus) J. Agardh**

*Fucus volubilis* Linnaeus, 1759:1344.

*Vidalia volubilis* (Linnaeus) J. Agardh, 1863:1121.—Piccone, 1879:33; 1884:137.—Bornet, 1892:301.—Muschler, 1910:309.—DeToni and Forti, 1914:298.—Boergesen, 1930:116.—Feldmann, 1931b:245; 1937:277; 1961:508.—Navarro and Uriarte, 1945:282.—Funk, 1955:144.—Riedl, 1963:77.—Ben Alaya, 1970:211.—Gerloff and Geissler, 1971:788.—Güven and Östig, 1971:126.—Giaccone et al., 1973, table iv.—Boudouresque and Perret, 1977:86.

DISTRIBUTION.—Tunisia (Gabes); northeastern Atlantic (Canary Islands); Mediterranean (Spain, France, Corsica, Italy, Sicily, Adriatic Sea, Greece, Turkey, Algeria, Libya).

SPECIMENS STUDIED.—EGM 22: 2124–2128 (US), 2129(NHA), 2130(INSTOP).

REMARKS.—Occasional; found in July; dredged from 37 to 47 m.

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**Arrange and paginate sequentially EVERY sheet of manuscript**—including ALL front matter and ALL legends, etc., at the back of the text—in the following order: (1) title page, (2) abstract, (3) table of contents, (4) foreword and/or preface, (5) text, (6) appendices, (7) notes, (8) glossary, (9) bibliography, (10) index, (11) legends.



